ANNUAL CALENDAR

OF

McGILL COLLEGE

AND

UNIVERSITY

FOR SESSION 1891—92,

WITH

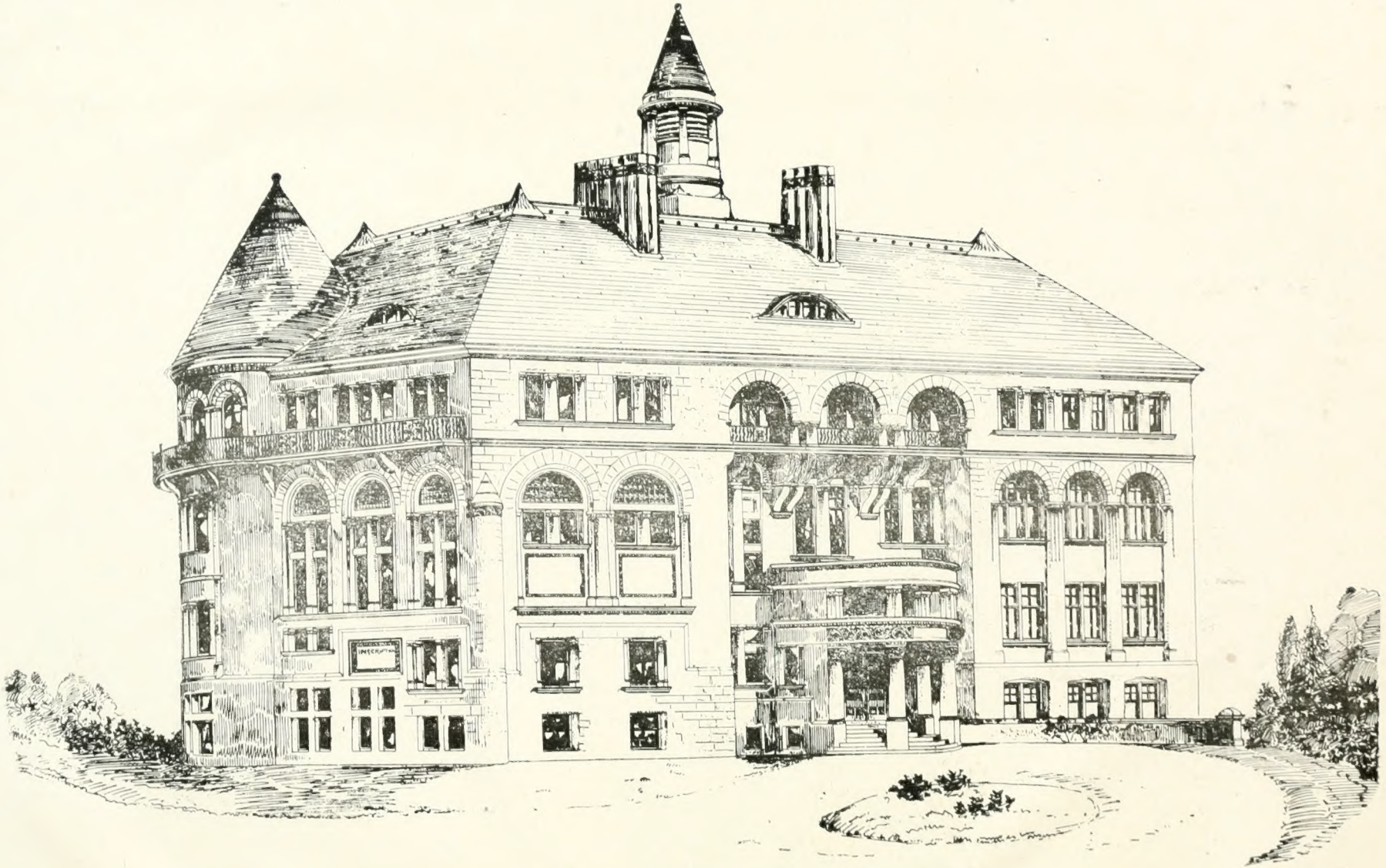
EXAMINATION PAPERS

FOR SESSION 1890—91.

Montreal:
PRINTED BY JOHN LOVELL & SON,
ST. NICHOLAS STREET.
1891.

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

http://www.archive.org/details/calendar189192mcgiuoft



THE W. C. McDONALD PHYSICS BUILDING.

Univ. Col.
M

ANNUAL CALENDAR

OF

McGILL COLLEGE

AND

UNIVERSITY,

MONTREAL

FOUNDED UNDER BEQUEST OF THE HON. JAMES McGILL,
ERECTED INTO A UNIVERSITY BY ROYAL CHARTER
IN 1821, AND RE-ORGANISED BY AN
AMENDED CHARTER IN 1852.

SESSION 1891-92.

Montreal:
PRINTED FOR THE UNIVERSITY BY JOHN LOVELL & SON.
1891.

LE
3
M2
1891/92

The *List of Graduates* and the *Examination Papers* of the Session 1890-91 are published separately, and may be obtained on application to the Secretary, or through booksellers.

18497
4/12/91

Governing Body of the University.

VISITOR:

HIS EXCELLENCY THE RIGHT HONOURABLE LORD STANLEY OF PRESTON, G.C.B., P.C.,

GOVERNOR-GENERAL OF CANADA, ETC.

GOVERNORS:

[*Being the Members of the Royal Institution for the Advancement of Learning.*]

THE HON. SIR DONALD A. SMITH, K.C.M.G., LL.D. (Hon. Cantab.), President and Chancellor of the University.
PETER REDPATH, ESQ.
JOHN H. R. MOLSON, ESQ.
THE HON. SIR ALEX. T. GALT, G.C.M.G., LL.D. (Hon. Edr.)
JOHN MOLSON, ESQ.
SIR JOSEPH HICKSON.
THE HON. JOHN J. C. ABBOTT, D.C.L., Q.C.
WILLIAM C. McDONALD, ESQ.
HUGH McLENNAN, ESQ.
GEORGE HAGUE, ESQ.
EDWARD B. GREENSHIELDS, B.A.
SAMUEL FINLEY, ESQ.
THE HON LEVI RUGGLES CHURCH, M.D.
ANDREW FREDERICK GAULT, ESQ.

(The Board of Governors has, under the Royal Charter, the power to frame Statutes, to make Appointments, and to administer the Finances of the University.)

PRINCIPAL:

SIR WILLIAM DAWSON, C.M.G., M.A., LL.D., F.R.S., *Vice-Chancellor*

(The Principal has, under the Statutes, the general superintendence of all affairs of the College and University, under such regulations as may be in force.)

FELLOWS:

ALEXANDER JOHNSON, M.A., LL.D., Vice-Principal and Dean of the Faculty of Arts.
HENRY ASPINWALL HOWE, LL.D., Governors' Fellow.
REV. JOHN COOK, D.D., Principal of Morrin College, Quebec.
REV. GEORGE CORNISH, M.A., LL.D., Elective Fellow, Faculty of Arts.
REV. D. H. MACVICAR, D.D., LL.D., Principal of the Presbyterian College, Montreal.

JOHN REDPATH DOUGALL, M.A., Representative Fellow in Arts.

REV. J. CLARK MURRAY, LL.D., Elective Fellow, Faculty of Arts.

HENRY T. BOVEY, M.A., C.E., Dean of the Faculty of Applied Science.

BERNARD J. HARRINGTON, B.A., Ph.D., F.G.S., Elective Fellow, Fac. App. Science.

REV. E. I. REXFORD, B.A., Governors' Fellow.

REV. JOHN JENKINS, D.D., LL.D., Governors' Fellow.

REV. CANON HENDERSON, M.A., D.D. (Dublin), Principal of the Montreal Diocesan Theological College.

REV. GEORGE DOUGLAS, LL.D., Principal of the Montreal Wesleyan Theological College.

J. S. ARCHIBALD, M.A., D.C.L., Elective Fellow, Faculty of Law.

GEORGE ROSS, M.A., M.D., Elective Fellow, Faculty of Medicine.

JOHN S. HALL, B.A., B.C.L., Representative Fellow in Law.

VERY REV. R. W. NORMAN, M.A., D.C.L., Governors' Fellow.

S. P. ROBINS, M.A., LL.D., Principal of McGill Normal School.

FREDERICK W. KELLEY, B.A., Ph.D. (Cornell), Representative Fellow in Arts.

REV. JAMES BARCLAY, M.A. (Glasgow), Governors' Fellow.

ROBERT CRAIK, M.D., Dean of Faculty of Medicine.

A. W. BANNISTER, M.A. (Victoria), Principal of St. Francis College.

THOMAS A. ROGER, M.D., Representative Fellow in Medicine.

JEFFREY H. BURLAND, B.A. Sc., Representative Fellow in App. Science.

MATTHEW HUTCHINSON, D.C.L., Representative Fellow in Law.

WILFRID T. SKAIFE, B.A. Sc., Representative Fellow in App. Science.

REV. WILLIAM M. BARBOUR, D.D. (Yale, U.S.), Principal of the Congregational College of British North America.

N. W. TRENHOLME, M.A., D.C.L., Dean of the Faculty of Law.

T. WESLEY MILLS, M.A., M.D., Representative Fellow in Medicine.

DUNCAN McEACHRAN, D.V.S., Dean of the Faculty of Comparative Medicine and Veterinary Science.

MALCOLM C. BAKER, D.V.S., Elective and Representative Fellow in Comparative Medicine and Veterinary Science.

REV. F. McAMMOND, B.A., Principal Stanstead Wesleyan College.

(The Governors, Principal and Fellows constitute, under the Charter, the Corporation of the University, which has the power, under the Statutes, to frame regulations touching the Courses of Study, Matriculation, Graduation and other Educational matters; and to grant Degrees.)

OFFICE OF SECRETARY, REGISTRAR AND BURSAR:—

[*And Secretary of the Royal Institution.*]

JAMES W. BRAKENRIDGE, B.C.L., Acting Secretary, Office East Wing, McGill College; Residence, 117 Shuter Street.

SAMUEL R. BURRELL, Clerk, 72a Cadieux Street.

OFFICE HOURS: 9 TO 5.

Professors Emeriti.

[*Retaining their Rank and Titles, but retired from the active work of Instruction.*]

HENRY ASPINWALL HOWE, LL.D.
Emeritus Professor in the Faculty of Arts.

WILLIAM WRIGHT, M.D.
Emeritus Professor in the Faculty of Medicine.

HON. R. G. LAFLAMME, D.C.L., Q.C.
Emeritus Professor in the Faculty of Law.

D. C. MACCALLUM, M.D.
Emeritus Professor in the Faculty of Medicine.

G. E. FENWICK, M.D.
Emeritus Professor of Surgery.

MATTHEW HUTCHINSON, D.C.L.
Emeritus Professor in the Faculty of Law.

HON. J. EMERY ROBIDOUX, D.C.L.
Emeritus Professor in the Faculty of Law.

Officers of Instruction.

SIR WILLIAM DAWSON, M.A., LL.D., F.R.S., C.M.G.
Principal, Logan Professor of Geology and Professor of Natural History. East Wing, McGill College.

ALEXANDER JOHNSON, M.A., LL.D. (Trin. Col., Dublin)
Professor of Mathematics, and Peter Redpath Professor of Natural Philosophy, Vice-Principal and Dean of the Faculty of Arts. 5 Prince of Wales Terrace.

REV. GEORGE CORNISH, M.A., LL.D.
Hiram Mills Professor of Classical Literature. Honorary Librarian. 177 Drummond Street.

PIERRE J. DAREY, M.A., B.C.L., LL.D., *Officier d'Académie.*
Professor of French Language and Literature. 39 McGill College Av.

ROBERT CRAIK, M.D.,
Dean of the Faculty of Medicine, and Professor of Hygiene. 1 Prince of Wales Ter.
Sherbrooke Street.

N. W. TRENHOLME, Q.C., M.A., D.C.L.
Dean of the Faculty of Law, and Gale Professor of Roman and Public Law. Temple Building, 185 St. James St Rosemont.
Cote St. Antoine.

HON. J. S. WURTELE, D.C.L.
Professor of Law of Real Estate. 78 Union Avenue.

GILBERT P. GIRDWOOD, M.D.
Professor of Chemistry, Faculty of Medicine. 54 Beaver Hall Hill.

REV. J. CLARK MURRAY, LL.D. (Glasgow)
Professor of Logic, and John Frothingham Professor of Mental and Moral Philosophy. 111 Mackay Street.

GEORGE ROSS, M.A., M.D.
Vice Dean and Professor of the Theory and Practice of Medicine. 49 Union Avenue.

BERNARD J. HARRINGTON, B.A., Ph.D., F.G.S.
David Y. Greenshields Professor of Chemistry and Mineralogy, and Lecturer in Assaying and Mining. Wallbrae Pl., off 256 Univ. St.

THOMAS G. RODDICK, M.D.
Professor of Surgery and Clinical Surgery. 80 Union Avenue.

WILLIAM GARDNER, M.D.
Professor of Gynæcology. 109 Union Avenue.

HENRY T. BOVEY, M.A., A.M.I.C.E., M.I.M.E., Fellow Queen's College, Cambridge.
Dean of the Faculty of Applied Science, William Scott Professor of Civil Engineering and Applied Mechanics. 31 Ontario Avenue.

CHARLES E. MOYSE, B.A. (London)
Molson Professor of English Language and Literature, Lecturer in History. 802 Sherbrooke.

JOHN S. ARCHIBALD, Q.C., M.A., D.C.L.
Professor of Commercial Law. 181 St. James St., or 113 Mackay.

C. H. McLEOD, Ma.E.
Professor of Surveying and Geodesy and Lecturer on Descriptive Geometry, Supt. of Meteorological Observatory. Observatory McGill College.

LEONIDAS HEBER DAVIDSON, Q.C., M.A., D.C.L.
Professor of Commercial Law. 61 Burnside Street, or 194 St. James.

FRANCIS J. SHEPHERD, M.D.
Professor of Anatomy. 152 Mansfield Street.

FRANK BULLER, M.D.
Professor of Ophthalmology and Otology. 123 Stanley Street.

JAMES STEWART, M.D.
Professor of Materia Medica and Therapeutics. 939 Dorchester Street.

GEORGE WILKINS, M.D.
Professor of Medical Jurisprudence and Lecturer in Histology. 893 Dorchester Street.

D. P. PENHALLOW, B. Sc. (Boston Univ.)
Professor of Botany. The Sherbrooke, Sherbrooke Street.

G. H. CHANDLER, M.A.
Professor of Practical Mathematics in Faculty of Applied Science, Lecturer in Mathematics Faculty of Arts, and Assistant Superintendent of Observatory. 32 Lorne Avenue.

RICHARD L. MACDONNELL, B.A., M.D.
Professor of Clinical Medicine. 117 Metcalfe Street.

T. WESLEY MILLS, M.A., M.D.
Professor of Physiology. McGill College.

J. CHALMERS CAMERON, M.D.
Professor of Midwifery and Diseases of Children. 941 Dorchester Street.

Rev. DANIEL COUSSIRAT, B.A., B.D., (*Universilé de France*) *Officier d' Academie.*
Professor of Hebrew and Oriental Literature. 106 Shuter Street.

A. J. EATON, M.A., Ph.D. (Leipsic)
Assistant Professor of Classics. 21 Durocher Street.

ARCHIBALD McGOUN, M.A., B.C.L.
Professor of Legal Bibliography. 294 Stanley St., or 181 St. James Street.

DUNCAN McEACHRAN, F.R.C.V.S., D.V.S.
Dean of the Faculty of Comparative Medicine and Veterinary Science and Professor of Veterinary Medicine and Surgery. 6 Union Avenue.

MALCOLM C. BAKER, D.V.S.
Professor of Veterinary Anatomy. 6 Union Avenue.

CHARLES McEACHRAN, D.V.S.
Professor of Veterinary Obstetrics and diseases of Cattle. 6 Union Avenue.

JOHN COX, M.A. (Cantab.), late Fellow Trin. Col., Cambridge.
William C. McDonald Professor of Experimental Physics. 20 Hutchison Street.

CHARLES A. CARUS-WILSON, B.A. (Cantab.), A.M.I.C.E.
William C. McDonald Professor of Electrical Engineering, Lecturer on Thermo-dynamics. McGill College.

CHRISTOPHER A GEOFFRION, Q.C., B.C.L.
Professor of Law of Contracts. 107 St. James Street.

THOMAS FORTIN, LL.L., B.C.L.
Professor of Civil Procedure and Municipal Law. 1613 Notre Dame Street.

W. De M. MARLER, B.A., B.C.L.
Professor of Notarial Law. 157 St James Street.

CHARLES J. DOHERTY, Q.C., B.C.L. *Professor of Civil Law.*	180 St. James Street.
HARRY ABBOTT, Q.C., B.C.L. *Professor of Commercial Law.*	11 Hospital Street.
EUGENE LAFLEUR, B.A., B.C.L. *Professor of Civil Law.*	N. Y. Life Building, Place d'Armes.
PAUL T. LAFLEUR, M.A. *Lecturer in Logic and English.*	58 University.
P. TOEWS, M.A. *Lecturer in German Language and Literature.*	6 Lorne Crescent.
R. F. RUTTAN, B.A., M.D. *Lecturer in Chemistry, Medical Faculty.*	McGill College.
JAMES BELL, M.D. *Lecturer in Clinical Surgery.*	53 Union Avenue.
FRANK D. ADAMS, M.A.Sc., *Lecturer in Geology and Petrography.*	41 McGill College Avenue
WILLIAM R. SUTHERLAND, M.D. *Curator of Medical Museum.*	764 Sherbrooke Street.
GEORGE W. MAJOR, B.A., M.D. *Lecturer on Laryngology.*	82 Union Avenue.
ALEXANDER D. BLACKADER, B.A., M.D. *Lecturer on Diseases of Children.*	Mountain Street.
T. JOHNSON ALLOWAY, M.D. *Instructor in Gynæcology.*	934 Dorchester Street.
F. G. FINLEY, M.D. *Senior Demonstrator of Anatomy.*	801 Dorchester Street.
H. S. BIRKETT, M.D. *Junior Demonstrator of Anatomy.*	123 Stanley Street.
E. H. HAMILTON, B.A.Sc. *Assistant to Superintendent of Meteorological Observatory.*	Observatory, McGill College.
PERCY N. EVANS, B.A.Sc. *Assistant to Professor of Chemistry, Arts and Applied Science.*	21 Milton Street.
R. TAIT McKENZIE, B.A. *Instructor in Gymnastics.*	Gymnasium, University St.
H. A. LAFLEUR, M.D. *Instructor in Medicine.*	McGill College.
GEO. E. ARMSTRONG, M.D. *Instructor in Surgery*	1127 Dorchester Street.
J. P. STEPHEN, *Instructor in Elocution.*	McGill College.
JOHN ELDER, M.D. *Assistant Demonstrator of Anatomy.*	Cote St. Antoine.
R. E. McKECHNIE, M.D *Assistant to the Lecturer on Histology.*	McGill College

DONALDA SPECIAL COURSE.

MISS HELEN S. GAIRDNER, Lady Superintendent.	47 Victoria Street.
MISS HELEN O. BARNJUM, *Instructress in Gymnastics.*	24 Union Avenue.

LIBRARY.

MR. H. MOTT, *Assistant Librarian,*	Library, McGill College.

General Statement.

SESSION OF 1891-92.

The Fifty-eighth Session of the University, being the Thirty-seventh under the amended Charter, will commence in the Autumn of 1890.

By Virtue of the Royal Charter, granted in 1821 and amended in 1852, the Governors, Principal and Fellows of McGill College constitute the Corporation of the University; and, under the Statutes framed by the Board of Governors, with approval of the Visitor, have the power of granting Degrees in all the Arts and Faculties, in McGill College, and Colleges affiliated thereto.

The Statutes and Regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar views will be sanctioned.

The educational work of the University is carried on in McGill College, Montreal, and in the Affiliated Colleges and Schools.

I. McGILL COLLEGE.

THE FACULTY OF ARTS.—The complete course of study extends over four Sessions, of eight months each; and includes Classics and Mathematics, Experimental Physics, English Literature, Logic, Mental and Moral Sciency Natural Science, and one Modern Language or Hebrew. The course of study is, with few exceptions, the same for all students in the first two years; but in the third and fourth years extensive options are allowed, more especially in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science, English Literature and Modern Languages. Certain exemptions are also allowed to professional Students. The course of study leads to the Degrees of B.A., M.A., and LL.D.

The Degree of B.A. from this University admits the holder to the study of learned professions without preliminary examination, in the Provinces of Quebec and Ontario, and in Great Britain and Ireland, &c.

THE DONALDA SPECIAL COURSE IN ARTS provides for the education of women, in separate classes, with course of study, exemptions and honours similar to those for men.

THE FACULTY OF APPLIED SCIENCE provides a thorough professional training, extending over three or four years, in Civil Engineering, Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, Electrical Engineering leading to the Degrees of Bachelor of Applied Science, Master of Engineering, and Master of Applied Science.

THE FACULTY OF MEDICINE.—The complete course of study in Medicine extends over four Sessions, of six months each, and one Summer Session of three months in the third Academic Year, and leads to the Degree of M.D., C.M.

THE FACULTY OF COMPARATIVE MEDICINE AND VETERINARY SCIENCE.—The complete course extends over three Sessions of six months each, and leads to the Degree of D.V.S.

THE FACULTY OF LAW.—The complete course in Law extends over three Sessions of six months each, and leads to the Degrees of B.C.L. and D.C.L.

II. AFFILIATED COLLEGES.

Students of Affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the Affiliated College, or in part in McGill College, and may come up to the University Examinations on the same terms with the Students of McGill College.

MORRIN COLLEGE, *Quebec.*—Is affiliated in so far as regards Degrees in Arts and Law. [Detailed information may be obtained from REV. JOHN COOK, D.D., Principal.]

ST. FRANCIS COLLEGE, *Richmond, P. Q.*—Is affiliated in so far as regards the Intermediate Examinations in Arts. [Detailed information may be obtained from A. W. BANNISTER, M.A., Principal.]

THE STANSTEAD WESLEYAN COLLEGE, *Stanstead, P. Q.*—Is affiliated in so far as regards the Intermediate Examination in Arts. [Detailed information may be obtained of REV. F. MCAMMOND, B.A., Principal.]

III. AFFILIATED THEOLOGICAL COLLEGES.

Affiliated Theological Colleges have the right of obtaining for their Students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on, and a number of Free Tuitions are granted by the Board of Governors to the Students of these Colleges, when matriculated in Arts.

THE CONGREGATIONAL COLLEGE OF BRITISH NORTH AMERICA, *Montreal.* Principal, REV. WILLIAM M. BARBOUR, D.D., 58 McTavish St.

THE PRESBYTERIAN COLLEGE, MONTREAL, in connection with the Presbyterian Church in Canada. Principal, REV. D. H. MACVICAR, D.D., LL.D., 69 McTavish St.

THE DIOCESAN COLLEGE OF MONTREAL. Principal, REV. CANON HENDERSON, M.A., D.D., 896 Dorchester St.

THE WESLEYAN COLLEGE OF MONTREAL. Principal, REV. GEORGE DOUGLASS, LL.D., 228 University St.

[Calendars of the above Colleges and all necessary information may be obtained on application to their Principals.]

IV. McGILL NORMAL SCHOOL.

THE MCGILL NORMAL SCHOOL provides the training requisite for Teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas, and may, on conditions stated in the announcement of the School, enter the classes in the Faculty of Arts for Academy Diplomas and for the Degree of B.A. Principal, S. P. ROBINS, LL.D., 30 Belmont St., Montreal.

V. AFFILIATED HIGH SCHOOLS, ETC.

The Trafalgar Institute for the higher education of women, Simpson St., Montreal; Principal, Miss Grace Fairley. The High School of Montreal, Metcalfe St.; Principal, H. Aspinwall Howe, LL.D. The Girls' High School of Montreal, Metcalfe St.; Lady Principal, Mrs. H. H. Fuller.

Schools which have prepared successful candidates for A.A. *or for matriculation (June,* 1890.)

High School, Montreal; Girls' High School, Montreal; Misses Symmers and Smith's School, Montreal; Mrs. Watson's School, Montreal; High School, Quebec; Girls' High School, Quebec; Girls' High School, St. John, N.B.; Aylmer Model School; Coaticook Academy; Cookshire Model School; Cowansville Academy; Danville Model School; Granby Academy; Huntingdon Academy; Inverness Academy; Knowlton Academy; Lachute Academy; St. Francis College School, Richmond; Sherbrooke Boys' Academy; Sherbrooke Girls' Academy; Stanstead Wesleyan College; St. John's High School; Sutton Model School; Waterloo Academy; Brockville Collegiate Institute; Glencoe High School; Goderich High School; Eliock School, Montreal; Ottawa Collegiate Institute; Parkhlil High School; Parkdale Collegiate Institute.

ACADEMICAL YEAR 1891-92.

SEPTEMBER, 1891.

1 Tuesday	Normal School opens.
2 Wednesday	Meeting of Normal School
3 Thursday	Committee.
4 Friday	Matriculation in Law.
5 Saturday	
6 SUNDAY	
7 Monday	Lectures in Law begin. Meeting
8 Tuesday	Faculty of Law.
9 Wednesday	
10 Thursday	
11 Friday	
12 Saturday	
13 SUNDAY	
14 Monday	Mat. and Sup. Exn's in Classics Exhib. and Scholarship Exam. Meeting of Faculty of Law.
15 Tuesday	Mat. and Sup. Ex'ns in Math's Exhib. & Scholarship Exam.
16 Wednesday	Mat. & Sup. Ex'ns in English, Logic, Men. and Mor. Phil. Exhib. and Sch. Exm'ns.
17 Thursday	Mat. & Sup. Ex'ns in Modern Lang's and Nat. Sc.; Exhib. and Sch. Exam'ns.
18 Friday	Exhib. and Sch. Ex'ns. Lect's
19 Saturday	in Arts and App. Sc. begin.
20 SUNDAY	
21 Monday	Meeting of Faculty of Arts.
22 Tuesday	
23 Wednesday	
24 Thursday	Summer Essays in Applied Sc.
25 Friday	Matric. Exam. in Medicine. Meeting of Governors. Register Medical Faculty opens.
26 Saturday	
27 SUNDAY	
28 Monday	
29 Tuesday	Meeting of Fac. of App. Sc.
30 Wednesday	

OCTOBER, 1891.

1 Thursday	Session of Medical and Veterinary Faculties begins.
2 Friday	Meeting Faculty of Arts.
3 Saturday	
4 SUNDAY	
5 Monday	Meeting of Faculty of Law.
6 Tuesday	Founder's Birthd'y. The Wm. Molson Hall opened, 1862.
7 Wednesday	Meeting of Normal School
8 Thursday	Committee.
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	Meeting of Faculty of Law.
13 Tuesday	
14 Wednesday	
15 Thursday	
16 Friday	Meeting of Faculty of Arts.
17 Saturday	Univ. Athletic Sports.
18 SUNDAY	
19 Monday	
20 Tuesday	
21 Wednesday	
22 Thursday	
23 Friday	Meeting of Governors.
24 Saturday	
25 SUNDAY	
26 Monday	Meeting of Museum Com.
27 Tuesday	Meeting of Library Com.
28 Wednesday	Regular Meeting of Corporation
29 Thursday	Reps. Schol. & Exh. Ac. and School Exams Appd.
30 Friday	Meeting of Faculty of Arts.
31 Saturday.	

NOVEMBER, 1891.

1 SUNDAY	
2 Monday	
3 Tuesday	Meeting of Fac. App. Science.
4 Wednesday	Meeting Normal School Com.
5 Thursday	
6 Friday	
7 Saturday	
8 SUNDAY	
9 Monday	Meeting of Faculty of Law
10 Tuesday	
11 Wednesday	
12 Thursday	
13 Friday	Meeting of Faculty of Arts.
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	
20 Friday	Meeting of Faculty of Arts
21 Saturday	
22 SUNDAY	
23 Monday	
24 Tuesday	
25 Wednesday	
26 Thursday	
27 Friday	Meeting of Governors.
28 Saturday	Medical Matriculation, P.Q.
29 SUNDAY	
30 Monday	

DECEMBER, 1891.

1 Tuesday	Meeting of Faculty of App. Sc
2 Wednesday	Meeting of Nor. Sch. Comm.
3 Thursday	
4 Friday	
5 Saturday	
6 SUNDAY	
7 Monday	
8 Tuesday	
9 Wednesday	
10 Thursday	
11 Friday	Meeting of Fac. of Arts. Lect. in Law, Arts and Ap. Sc. end.
12 Saturday	Exam. Bot. Med. Students. Examinations in Law.
13 SUNDAY	
14 Monday	Christmas Examinations in
15 Tuesday	Law, Arts and Applied
16 Wednesday	Science begin. Meeting of
17 Thursday	Faculty of Law.
18 Friday	
19 Saturday	
20 SUNDAY	
21 Monday	Christmas Vacation begins.
22 Tuesday	
23 Wednesday	
24 Thursday	
25 Friday	Christmas-Day.
26 Saturday	Meeting of Governors.
27 SUNDAY	
28 Monday	
29 Tuesday	
30 Wednesday	
31 Thursday	

JANUARY, 1892.

1 Friday	
2 Saturday	
3 SUNDAY	
4 Monday	Christmas Vacation ends.
5 Tuesday	Lectures in Arts, Law, Med. & App. Science recommence. Meeting of Facs. of Arts and Law.
6 Wednesday	Meeting of Fac. of App. Sci.
7 Thursday	Meeting of Nor. Sc. Comm.
8 Friday	Meeting of Faculty of Arts.
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	Meeting of Faculty of Arts.
16 Saturday	
17 SUNDAY	
18 Monday	
19 Tuesday	
20 Wednesday	
21 Thursday	
22 Friday	Meeting of Governors.
23 Saturday	
24 SUNDAY	
25 Monday	Meeting of Museum Com.
26 Tuesday	Meeting of Library Com. and of School Examiners.
27 Wednesday	Regular Meet'g of Corporation. Examiners appointed. Annual Report to Visitor.
28 Thursday	Meeting of Faculty of Arts and
29 Friday	University Examiners.
30 Saturday	Theses for M.A.&LL.D. to be
31 SUNDAY	sent in to the Dean of Fac. of Arts.

FEBRUARY, 1892.

1 Monday	
2 Tuesday	Meeting of Fac. App. Science.
3 Wednesday	Meeting of Nor. Sch. Comm.
4 Thursday	
5 Friday	
6 Saturday	
7 SUNDAY	
8 Monday	Meeting of Faculty of Law.
9 Tuesday	
10 Wednesday	
11 Thursday	
12 Friday	Meeting of Faculty of Arts. Supplemental Exam's in Arts and Applied Science.
13 Saturday	
14 SUNDAY	
15 Monday	
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	Meeting of Faculty of Arts.
20 Saturday	
21 SUNDAY	
22 Monday	
23 Tuesday	Theses for Degree of B.C.L. to
24 Wednesday	be sent in to Dean of Faculty.
25 Thursday	
26 Friday	Meeting of Governors.
27 Saturday	
28 SUNDAY	
29 Monday	

MARCH, 1892.

1 Tuesday	Meeting of Fac. of Ap. Science. Theses for B.C.L. sent in.
2 Wednesday	Meeting of Nor. Sc. Com.
3 Thursday	No Lectures.
4 Friday	Meeting of Fac. of Arts.
5 Saturday	
6 SUNDAY	
7 Monday	Meeting of Faculty of Law.
8 Tuesday	
9 Wednesday	
10 Thursday	
11 Friday	
12 Saturday	Examinations in Law, and Botany Med. Fac.
13 SUNDAY	
14 Monday	
15 Tuesday	Meeting Fac. App. Sci.
16 Wednesday	Lectures in Medicine end.
17 Thursday	Exam's in Med. begin.
18 Friday	Meeting of Fac. of Arts. Reports of Attendance on Lects.
19 Saturday	
20 SUNDAY	
21 Monday	
22 Tuesday	
23 Wednesday	
24 Thursday	
25 Friday	Meeting of Governors. Medica Matriculation, P.Q.
26 Saturday	
27 SUNDAY	
28 Monday	
29 Tuesday	Meeting of Fac. of Ap. Science
30 Wednesday	Lects. in Arts and Ap. Sc. end.
31 Thursday	Conv for Degrees in Veterinary Science. Ex. in Arts begin.

APRIL, 1892.

1 Friday	Convocation for Degrees in
2 Saturday	Medicine.
3 SUNDAY	
4 Monday	
5 Tuesday	
6 Wednesday	Meeting of Nor. Sc. Committee
7 Thursday	
8 Friday	Meeting of Fac. of Arts.
9 Saturday	
10 SUNDAY	
11 Monday	Meeting of Faculty of Law.
12 Tuesday	Summer Session Med. Fac.
13 Wednesday	begins.
14 Thursday	Lectures in Law end.
15 Friday	Good Friday. Easter Vac. begins
16 Saturday	
17 SUNDAY	Easter.
18 Monday	
19 Tuesday	Easter Vacation ends.
20 Wednesday	Exams. in Law begin.
21 Thursday	Meeting of Examiners, and of Fac. Arts and Law.
22 Friday	Meeting of Governors.
23 Saturday	
24 SUNDAY	
25 Monday	Meeting of Museum Committee and Faculty of Law.
26 Tuesday	Meeting of Library Committee Declaration of result of Exam's.
27 Wednesday	Regular meeting of Corporation.
28 Thursday	
29 Friday	Convocation for Degrees in Law and Applied Science.
30 Saturday,	Convocation for Degrees in Arts.

MAY, 1892.

1 SUNDAY	
2 Monday	Meeting of Examiners for Sch. Examinations. Examinations in Normal School begin.
3 Tuesday	Meeting Nor. Sch. Committee.
4 Wednesday	
5 Thursday	
6 Friday	
7 Saturday	
8 SUNDAY	
9 Monday	
10 Tuesday	
11 Wednesday	
12 Thursday	
13 Friday	
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	
20 Friday	
21 Saturday	
22 SUNDAY	
23 Monday	Queen's Birthday.
24 Tuesday	
25 Wednesday	
26 Thursday	Meeting of Governors.
27 Friday	
28 Saturday	
29 SUNDAY	
30 Monday	Normal Sch. closes for Summer Vacation.
31 Tuesday	

JUNE, 1892.

1 Wednesdny	Examinations for Matric. and Associate in Arts begin. Normal School Committee.
2 Thursday	
3 Friday	
4 Saturday	
5 SUNDAY	Whit-Sunday.
6 Monday	Meeting of Faculty of Law
7 Tuesday	
8 Wednesday	
9 Thursday	
10 Friday	
11 Saturday	
12 SUNDAY	
13 Monday	
14 Tuesday	
15 Wednesday	
16 Thursday	
17 Friday	Declaration of results of School Examinations.
18 Saturday	
19 SUNDAY	Trinity Sunday
20 Monday	Meetingof Museum Committee.
21 Tuesday	Meeting of Library Committee.
22 Wednesday	Regular Meeting of Corporat'n. Report of Normal School.
23 Thursday	
24 Friday	Meeting of Governors.
25 Saturday	
26 SUNDAY	
27 Monday	
28 Tuesday	Summr. Sessn. Med. Fac. ends.
29 Wednesday	
30 Thursday	

JULY, 1892.

1 Friday	
2 Saturday	
3 SUNDAY	
4 Monday	
5 Tuesday	
6 Wednesday	
7 Thursday	
8 Friday	
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	
16 Saturday	
17 SUNDAY	
18 Monday	
19 Tuesday	
20 Wednesday	
21 Thursday	
22 Friday	
23 Saturday	
24 SUNDAY	
25 Monday	
26 Tuesday	
27 Wednesday	
28 Thursday	
29 Friday	
30 Saturday	
31 SUNDAY	

AUGUST, 1892.

1 Monday	
2 Tuesday	
3 Wednesday	
4 Thursday	
5 Friday	
6 Saturday	
7 SUNDAY	
8 Monday	
9 Tuesday	
10 Wednesday	
11 Thursday	
12 Friday	
13 Saturday	
14 SUNDAY	
15 Monday	Peter Redpath Museum opened 1882.
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	
20 Saturday	
21 SUNDAY	
22 Monday	
23 Tuesday	
24 Wednesday	
25 Thursday	
26 Friday	
27 Saturday	
28 SUNDAY	
29 Monday	
30 Tuesday	
31 Wednesday	

FACULTY OF ARTS.

EXHIBITION, SCHOLARSHIP, &c., EXAMINATIONS, SEPTEMBER, 1891.

Day.	Date	First Year.	Second Year.	Third Year.	Hour
Monday.	14	Greek.	Greek.	Greek.	9 to 12
"	14	Latin.	Latin.	Latin Prose Comp.	2 to 5
"	14			Mathematics.	9 to 12
Tuesday.	15	Mathematics.	Mathematics.	Latin.	9 to 12
"	15			Mathematics.	9 to 12
"	15			Botany.	9 to 12
"	15	Mathematics.	Mathematics.	Ancient History.	2 to 5
"	15			Botany.	2 to 5
Wednesday.	16	English.	English.	English.	9 to 12
"	16			Logic.	9 to 12
"	16	English.		English.	2 to 5
"	16		Chemistry.	Chemistry.	2 to 5
Thursday.	17			Mathematics.	9 to 12
"	17			Botany.	9 to 12
"	17		French.	French.	9 to 12
"	17	Grammar and Comp. (Classics.)	General Paper. (Classics.)	English Composition	2 to 5
Friday.	18		Mathematics.	Mathematics.	9 to 12
			English.		2 to 5

CHRISTMAS EXAMINATIONS, DECEMBER, 1891.

Day.	Date	First Year.	Second Year.	Third Year.	Fourth Year.
Monday.	14	Latin.	Latin.	Mechanics.	Astronomy.
"	14		M'matics, P.M.	Ex. Physics, P.M.	Ex. Physics, P.M
Tuesday.	15	Greek.	Botany.	Greek.	Greek.
"	15			Zoology, P.M.	Latin, P.M.
Wednesday.	16	Mathematics.	Psychology.	Latin.	Moral Philosophy
"	16	French, P.M.	French, P.M.	Ment. Phil., P.M.	Geology, P.M.
Thursday.	17	Chemistry.	Greek.		
"	17	German, P.M.	German, P.M.		
"	17	Hebrew, P.M	Hebrew, P.M.		
Friday.	18	English.			

FACULTY OF ARTS.

SESSIONAL AND HONOUR EXAMINATIONS, APRIL, 1892.

Day.	First Year.	Second Year.	Third Year.	Fourth Year.
March.	A.M. P.M.	A.M. P.M.	A.M. P.M.	A.M. P.M.
31 Thurs.	Hebrew and German.	Hebrew and German.....	Hebrew. and German ...	Hebrew and German.
April 1 Fri.	Greek.	Greek.	Mechanics.....	B.A. Honours. Ethics. Ethics.
4 Mon.	Latin....Anc.History	Latin. Composition.	Latin.....	Latin. Latin.
5 Tues.	English.	English. English.	Ex. Phy- English. sics.	Ex. Phy- History. sics.
6 Wed.				
7 Thurs.	Geometry and Arithmetic. ...	Mathematics.....	Greek.....	Mechanics and
8 Fri.	Trigonometry and Algebra.....	Mathematics...	Astronomy and .... Optics.....	B.A. Honours. Astr'y. and Optics. B.A. Honours.
11 Mon.	French.....	French.....	Metaphysics.....	Geology. Geology.
12 Tues.	Chemistry.....	.....	.... Zoology	Greek. History.
13 Wed.	.....	Logic.....	.....	.....
14 Thurs.	.....	Botany.....	French....	French; B.A. Honours.
15 Fri.	Good Friday.	.....	.....	.....
16 Sat.				
17 Sun.	Easter day.			
18 Mon.				
19 Tues.	Easter vacation ends.			
20 Wed.	Honour Examinations	HonourExaminations	Honour Exam'tions	B.A. Honours.
21 Thurs.	Meeting of	Examiners and Faculty.		
22 Fri.	Honour Examinations	Honour Examinations	Honour Exam'tions	B.A. Honours.
23 Sat.	Meetingof	Examiners and Faculty.		
25 Mon.	Meeting of	Examiners and Faculty.		
26 Tues.	Meeting of	Examiners and Faculty.	Declaration	of results.
27 Wed.	Meeting of	Corporation.		
28 Thurs.				
29 Fri.				
30 Sat.	Convocation for Degrees in Arts.			

The Examinations begin at 9 A.M. and 2 P.M. when not specified otherwise.

FACULTY OF APPLIED SCIENCE.

EXAMINATIONS—1891-92.

CHRISTMAS, 1891.

The days of the several Examinations will be announced by the Faculty during the Session.

SESSIONAL, 1892.

Days.	First Year.	Second Year.	Third Year.	Fourth Year.
W. Mch. 30	Freehand Drawing.	Descrp've Geometry	Descrp've Geometry	Mineralogy (Adv.).
T. " 31	German.	German.	German.	
F. April 1		Chemistry. Surveying.	Chemistry. Surveying.	Geodesy.
S " 2		Essay.	Essay.	Essay.
Sun. " 3	.....	.....	....	.....
M. " 4	Practical Chemistry.	Mechanism.	Theory of Structures	Theory of Structures.
T. " 5	English.	Exp. Physics.	Exp. Physics.	
W. " 6	Mathematics.	Mathematics.	Mathematics.	Thermodynamics.
T. " 7		Practical Chemistry.	Practical Chemistry.	Assaying.
F. " 8			Theory of Structures.	Theory of Structures
S. " 9	Mathematics.	Mathematics.	Mathematics.	
Sun. " 10	....	....	....	....
M. " 11	French.	French.	Kinematics of Ma Geology. [chinery.	Kinematics of Machinery.
T " 12	Chemistry.	Chemistry (a.m.). Zoology (p.m.).	Chemistry. Theory of Structures (Honours).	Th. of Structures.
W. " 13			Mining.	Metallurgy.
T. " 14		Botany.	Dynamics of Machinery.	Dynamics of Machinery.
F. " 15				Th. of Structures.
S. " 16	Mathematics.	Mathematics.	Mathematics.	Hydraulics.
Sun. " 17	.....	....	.....	....
M. " 18				
T. " 19			Mineralogy (adv.).	
W. " 20				
T. " 21			Mineralogy (adv.).	
F. " 22				
S. " 23				

Faculty of Arts.

THE PRINCIPAL (Ex-officio).

Professors :—DAWSON.
JOHNSON.
CORNISH.
DAREY.
MURRAY.
HARRINGTON.
MOYSE.
PENHALLOW.
COUSSIRAT.
COX.

Assistant Prof. :—EATON.

Lecturers :—CHANDLER.
LAFLEUR.
TOEWS.
ADAMS.

Dean of the Faculty :—ALEXANDER JOHNSON, LL.D.
Honorary Librarian :—REV. GEO. CORNISH, LL.D.

[CONTENTS.—*Matriculation*, &c., § I.; *Exhibitions*, &c., § II.; *Course of Study*, § III.; *Examinations, Degrees*, &c., § IV.; *Exemptions*, &c., § V. *Medals*, &c., § VI.; *Licensed Boarding Houses*, § VII.; *Attendance and Conduct*, § VIII.; *Library*, § IX.; *Peter Redpath Museum*, § X.; *Fees*, &c., § XI.; *Courses of Lectures*, § XII.]

The next session of this Faculty will begin on September 14th, 1891, and will extend to April 30th, 1892.

§ I. MATRICULATION AND ADMISSION.

In this University those only who attend Lectures are denominated Students.

Students in the Faculty of Arts are classified as Matriculated or Occasional. Matriculated Students are those who have their names entered in the Matriculation Book; they are subdivided into Undergraduates and Partial Students; Non-matriculated are denominated Occasional Students. The conditions of admission for each, and for Students of other Universities are given below.

1. UNDERGRADUATES.

Undergraduates alone can proceed to the degree of B A. Candidates for admission to the First Year as Undergraduates are required to pass the First Year Entrance Examination. The successful Candidates are arranged as First Class, Second Class, and

Passed. To the most deserving in the First Class the First Year Exhibitions are awarded. For those who aim at passing only, a minimum course is appointed, and there are two examinations in the year, as follows :—

(1) That held in the first week of June, at the same time as the examinations for Associate in Arts. Schools desirous to take advantage of this may send their pupils for examination to McGill College; or, if at a distance, by sending in to the Secretary of the University the names of Deputy Examiners for approval, with a list of candidates, on or before May 1st, may have papers sent to them. (2) That held at the opening of the session, on September 14th and following days, in McGill College alone.

As the examination is intended as a test of qualification for admission to the classes of the University, certificates of passing are not granted except to those who subsequently attend lectures.

First Year Entrance Examinations.

(a) For Passing only.

Examinations beginning on June 1st in McGill College and local centres; on September 14th in McGill College only.

Greek.—Xenophon, Anabasis, Book I.; Greek Grammar.

Latin.—Caesar, Bell. Gall., Book I.; and Virgil, Aeneid, Book I., lines 1–300; Latin Grammar.

Mathematics.—Arithmetic, including a knowledge of the Metric system; Algebra to Simple Equations (inclusive), but to Quadratic Equations (inclusive), in June 1892 and afterwards; Euclid's Elements, Books I., II., III.

English.—Writing from Dictation. A paper on English Grammar, *including Analysis.* A paper on the leading events of English History. Essay on a subject to be given at the time of the examination.

French.—Grammar up to the beginning of Syntax. An easy translation from French into English.

Candidates unable to take French are not excluded, but will be required to study German after entrance.

At the September (but not at the June) examinations, an equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners on application made through the Professor of Classics. At the June examination, candidates from Ontario may present an equivalent amount from the books prescribed for the Junior Matriculation Examination of the University of Toronto.

Candidates who at the Examination for Associate in Arts have passed in the above subjects are admitted as Undergraduates.

The Matriculation or Junior leaving Examination accepted by the Universities of Ontario is accepted by the Faculty in so far as the subjects of their programme satisfy the examiners of the Faculty.

For Candidates from Ontario, Second Class non-professional certificates will be accepted *pro tanto* in the Examination.

Candidates who fail in one or more subjects at the June examination, and present themselves again in September, will be exempted from examination in those subjects only in which the examiners may have reported them as specially qualified.

(*b*) *Higher Examination—For First Class, Second Class, and Passing.*

The examination will be held on September 14th and following days in McGill College only. (For Exhibitions, see § II.)

Greek.—Homer, Iliad, Bk. IV.; Xenophon, Anabasis, Bk. I.; Demosthenes, Philippics, I. and II.

Latin.—Cicero, in Catilinam, Orat. I.; Virgil, Aeneid, Bk. I.; Caesar, Bell Gall., Bks. I. and II.

A paper on Greek and Latin Grammar.

Text-books.—Hadley's or Goodwin's Greek Grammar; Arnold's Greek Prose Composition, Exercises 1 to 25; Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV.; or Arnold's Latin Prose Composition, by Bradley.

Mathematics.—Euclid, Bks. I., II., III., IV.; Algebra to end of Harmonical Progression (Colenso); Arithmetic.

English.—English Grammar and Composition.—(Mason's Grammar, omit Derivation and Appendix.)

French (solely as a test of qualification to join the French Class).—Grammar up to the beginning of Syntax; an easy translation from French into English. Candidates unable to take French will be required to study German after entrance.

Second Year Entrance Examination.

Candidates may be admitted into the Second Year as Undergraduates, if able to pass the Second Year Entrance Examination. The regulations for this correspond to those for the First Year, the higher examination being the same as that for the Second Year Exhibitions (see § II.) held in September; or the Candidates may take the First Year Sessional Examinations held in April. There is besides,

For Passing only.

An Examination beginning on Sept. 14th, in McGill College only.

In Classics.—Greek.—Homer, Iliad, Book VI.; Xenophon, Anabasis, Book I. Grammar and Prose Composition.

Latin.—Virgil, Aeneid, Book VI.; Cicero, Orations against Catiline; Grammar and Prose Composition.

[An equivalent amount of other books or other authors in Latin and Greek than those named above may be accepted by the Examiners for entrance into the Second Year, on application made through the Professor of Classics].

In Mathematics:—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (Omitting Propositions 27, 28, 29 of Book VI.)

Algebra.—To end of Quadratic Equations. (Colenso's Alg.)

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic.—Elementary rules, Proportion, Interest, Discount &c., Vulgar and Decimal Fractions, Square Root; Metric System.

In English Literature.—Writing from Dictation, English Grammar, including Analysis, English Composition, English History (Buckley). Essay.

In French.—French Grammar; or (instead of French) *German*, in which knowledge sufficient to enable the Candidate to join the regular class will be required.

In Chemistry.—The Chemistry of the non-metallic Elements and of the more common metals.

[*Note.*—Candidates unable to pass in French or German are not excluded, but they are required to begin German, and to continue the study of it for two years.

---

2. PARTIAL AND OCCASIONAL STUDENTS.—STUDENTS OF OTHER UNIVERSITIES.

Partial Students.—Candidates for Matriculation as Partial Students i.e, taking three or more courses of Lectures, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

The subjects in which an examination is necessary are: Latin, Greek, Mathematics, English. French. Candidates are required to appear at the ordinary entrance examinations announced above;

but on application to the Faculty, may, for sufficient cause, have a later day appointed.

OCCASIONAL STUDENTS.—Persons desirous of taking one or two courses of Lectures as Occasional Students may apply to the Dean for entry in his Register, and, after satisfying the professor or the professors of the subjects of the lectures as to their fitness, may procure from the Secretary tickets for the lectures.

STUDENTS OF OTHER UNIVERSITIES may be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

---

3. GENERAL REGULATIONS.

Candidates for entrance into the First Year of the Faculties of Medicine or Applied Science in McGill University may pass in the above examinations.

Every Student is expected to present, on his entrance, a written intimation from his parent or guardian of the name of the minister of religion under whose care and instruction it is desired that the Student should be placed, who will thereupon be invited to put himself in communication with the Faculty on the subject. Failing such intimation from his parent or guardian, the Faculty will endeavour to establish befitting relations.

Every matriculated Student is required to sign in the Matriculation Book the following:—

DECLARATION.

"I hereby declare that I will faithfully observe the statutes, rules and ordi-"nances of this University of McGill College to the best of my ability."

---

4. DIRECTIONS TO CANDIDATES FOR ADMISSION.

Candidates are required :—

(*a*) To present themselves to the Dean, and fill up a form of application for admission. (§ I.)

(*b*) To pass the required examinations (§ I.). (Unless already passed).

(*c*) To procure tickets from the Registrar (§ XI.); and, if not Occasional Students, to sign the Matriculation Book.

(*d*) To present their tickets to the Dean. (§ XI.)

(*e*) To provide themselves with the Academic dress. (§ VIII.)

---

§ II. SCHOLARSHIPS AND EXHIBITIONS.

General Regulations.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not more than three sessions have elapsed since their Matriculation ; and also to Candidates who have obtained what the Faculty may deem equivalent standing in some other University, provided that application be made before the end of the Session preceding the examination.

3. Scholarships are divided into two classes :—(1) *Science* Scholarships ; (2) *Classical and Modern Language* Scholarships. The subjects of examination for each are as follows :—

Science Scholarships.—Differential and Integral Calculus ; Analytic Geometry ; Plane and Spherical Trigonometry ; Higher Algebra and Theory of Equations ; Botany ; Chemistry ; Logic. (For subdivision, see below.)

Classical and Modern Language Scholarships.—Greek ; Latin ; English Composition ; English Language, Literature, and History ; French or German.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to Candidates for entrance into the First Year.

Second Year Exhibitions are open for competition to Students who have passed the First Year Sessional Examinations, provided that not more than two Sessions have elapsed since their Matriculation ; and also to Candidates for entrance into the Second Year.

The subjects of examination are as follows :—

First Year Exhibitions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language and Literature, Chemistry and French or German.

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No Student can hold more than one Exhibition or Scholarship at the same time, but four of the First Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another year.

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty.

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz. :—In October, December, February, and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every session.

There are at present fifteen Scholarships and Exhibitions :—

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal :—value, $100 yearly, open to both men and women.

TEN MCDONALD SCHOLARSHIPS AND EXHIBITIONS, founded by W. C. McDonald, Esq., Montreal :—value, $125 each, yearly.

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects : —value, $120 yearly.

THE GEORGE HAGUE EXHIBITION, given by George Hague, Esq., Montreal, for the encouragement of the study of Classics :—value, $125 yearly.

THE MAJOR H. MILLS SCHOLARSHIP, founded by bequest of the late Major Hiram Mills :—value, $100 yearly.

THE BARBARA SCOTT SCHOLARSHIP, founded by the late Miss Barbara Scott, for the encouragement of the study of the Classical languages and literature —value, $100 to $120 yearly.

EXHIBITIONS AND SCHOLARSHIPS OFFERED FOR COMPETITION AT THE OPENING OF THE SESSION, SEPT., 1891.

To Students entering the First Year, four Exhibitions of $125, *and two of* $100.

The First Year Exhibitions will be awarded to the best answerers in the First Year Higher Entrance Examination (see § I.), provided there be absolute merit.

But in subsequently distributing the Exhibitions of higher value among the successful Candidates, answering in the following subjects will be taken into account also :—

1. A re-translation into Latin of an English version of some passage from one of the easier Latin Prose writers. (For specimens see Smith's Principia Latina, Part V.)

2. Euclid, Book VI. (omitting Props. 27, 28, 29), with Defs. of Book V.

3. English :—An examination upon one of Shakspere's plays. For 1891 *Coriolanus*.

4. French :—Syntax and translation from English into French, in addition to the Entrance course.

To Students entering the Second Year, three Exhibitions of $125, *and two of* $100.

Subjects of Examination :—

Greek.—Homer, Odyssey, Bk. VII.; Herodotus, Bk. III., chaps. 1 to 67 ; Demosthenes, Olynthiacs I. and II.

Latin.—Virgil, Georgics, Bk. I.; Horace, Odes, Book I.; Livy, Bk. XXII. Greek and Latin Prose Composition.

A paper on Grammar and History.

TEXT-BOOKS.—Cox's General History of Greece Mommsen's History of Rome (abridged). Goodwin's Greek Grammar. Arnold's Greek Prose Composition. Latin Prose through English Idiom (Abbott).

Mathematics.—Euclid (six books) ; Algebra (Hall & Knight's Advanced) ; McDowell's Exercises in Modern Geometry ; Theory of Equations (in part) ; Trigonometry (first four chapters Galbraith & Haughton).

English Literature.—Mason's Grammar. Shakspere, *As You Like it.* Trench, *Study of Words.*

Chemistry.—Roscoe's Lessons in Elementary Chemistry as far as p. 264.

French.—Darey, Principes de Grammaire Française ; Lafontaine, les Fables, livres I. and II. ; Molière, L'Avare.

Or, instead of French :—

German.—German Grammar.—Adler's Reader parts I and II. Schiller Der Gang nach dem Eisenhammer ; Der Taucher.

A candidate for a Second Year Exhibition to be successful must not, at the special examination, be placed in the Third Class in more than one of the ordinary subjects. The award is made on the aggregate of the marks among those who fulfil this condition.

To Students entering the Third Year three Scholarships of $125, *and one of* $120, *tenable for two years.*

One of these is offered in Mathematics and Logic, and one in Natural Science and Logic, as follows :—

1. *Mathematics.*—Differential Calculus (Williamson, Chaps. 1, 2, 3, 4, 7, 9 ; Chap. 12, Arts. 168-183 inclusive ; Chap. 17, Arts. 225-242 inclusive). Integral Calculus (Williamson, Chaps. 1, 2, 3, 4, 5 ; Chap. 7, Arts. 126-140 inclusive ; Chap. 8, Arts. 150-156 inclusive ; Chap. 9, Arts. 168-176 inclusive). Analytic Geometry (Salmon's Conic Sections, subjects of Chaps. 1-13 [omitting Chap. 8], with part of Chap. 14). Lock's Higher Trigonometry ; McLelland and Preston's Spherical Trigonometry, Part I. Salmon's Modern Higher Algebra (first four chapters). Todhunter's or Burnside and Panton's Theory of Equation (selected course).

Logic, as in Jevons' Elementary Lessons on Logic.

2. *Natural Science.—Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams, Pteridophytes and Bryophytes. *Chemistry*, as in Roscoe's Lessons in Elementary Chemistry.

Logic, as in Jevons' Elementary Lessons on Logic.

Two will be given on an Examination in Classics and Modern Languages, as follows :—

Classics.—Greek.—Euripides, Medea ; Demosthenes, the Olynthiacs ; Xenophon, Hellenics, Book I.; Herodotus, Book VIII.; Thucydides, Book VI. *Latin.*—Horace, Satires, Book I., and Epistles, Book I.; Virgil, Georgics, Book I. ; Terence, Adelphi ; Tacitus, Annals, Book I. ; Pliny, Select Letters (Pritchard and Bernard ; Clarendon Press Series). Greek and Latin Prose Composition.

History.—Text-Books —Rawlinson's Manual of Ancient History ; Smith's Student's Greece ; Liddell's Rome.

English Language and Literature.—Spalding's English Literature (Chap. VI. Part III., to end of book) ; Shakspere, Tempest ; Milton's Paradise Lost, Books I. and II. ; Trench, Study of Words.

English Composition.—High marks will be given for this subject.

French.—Racine, Britannicus ; Molière, les Femmes Savantes. French Grammar. Bonnefon, les Ecrivains célèbres de la France. Translation from English into French.

German.—Schiller, Der Neffe als Onkel. Egmont Leben und Tod. (Buchheim) Die Kraniche des Ibycus. German Grammar. Trans. fr. Engl. into German.

Classical Subjects for Exhibitions, September, 1892.

First Year.—*Greek.*—Homer, Iliad, Bk. IV.; Xenophon, Anabasis, Book I. ; Demosthenes, Philippics I. and II. (or Homer, Odyssey, Bk. VII.).

Latin.—Virgil, Aen., Bk. I. ; Cicero, In Catilinam, Orat. I. and II. Caesar, Bell. Gall., Bks. I. and II.

Second Year.—*Greek.*—Homer, Odyssey, Bk. VII. ; Demosthenes, Olynthiacs, I. and II. ; Plato, Laches and Euthyphro.

Latin.—Virgil, Georgics, Bk. I. ; Horace, Odes, Bk. I. ; Livy, Bk. XXII.

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the Students holding them to exemption from the Tuition Fees ($30) in the Faculty of Arts.

Sixteen have been placed by the Governors at the disposal of His Excellency the Governor General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, two of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Four exemptions from fees may be granted by the Board of Governors, from time to time, to the most successful Students who may present themselves as Candidates. By order of the Board one of these is given annually to the Dux of the High School of Montreal, and one to the Dux of any other Academy or High School, sending up in one year for entrance three or more Candidates competent to pass creditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among its pupils an Annual Bursary in the Faculty of Arts of not less than $80, the Governors will add the amount of the fees of tuition hereto.

Exemptions from fees, not exceeding three in number, may be given to holders of the Academy Diploma of the McGill Normal School, who, on fulfilling the required conditions, enter in the Second Year, if at the Diploma Examination they have taken 75 per cent. of the total marks, with not less than two-thirds of the marks in Latin and in Greek.

By a resolution of the Board of Governors, exemptions are granted to students of any affiliated Theological College, recommended by its Principal, and entering the Faculty of Arts as Matriculated Students.

One exemption is given annually to the pupil (boy or girl) of the Montreal High School holding a Commissioner's exemption from the Schools of the Protestant Commissioners, Montreal, who has taken the highest marks at the A. A. Examination, and is recommended by the Commissioners.

---

§ III. COURSE OF STUDY.

An Undergraduate, in order to attain the Degree of B.A., is required, after passing the First Year Matriculation Examination (see § I), to attend the appointed courses of lectures regularly for four years, and to pass two Examinations in each year, viz., at Christmas and in April. If he fail at any one of these examinations he is not allowed to proceed with his course until he has passed it subsequently. (See § IV.) Undergraduates are arranged, according to their standing, as of the First, Second, Third or Fourth Year.

The special arrangements made for Honour Students and for those attending lectures in other Faculties also are stated in § V.

ORDINARY COURSE FOR THE DEGREE OF B.A.

FIRST YEAR.

GREEK.—HOMER.—Iliad, Book XXII. Xenophon.—Cyropaedeia, Book I. Studies in History and Literature.

LATIN.—CICERO.—Select Orations. VIRGIL.—Aeneid, Bk. X.—Translation at sight.—Studies in History and Literature.—Latin Prose Composition.

MATHEMATICS.—Arithmetic. Euclid, six books. Algebra to end of Quadratic equations. Plane Trigonometry, in part.

ENGLISH LANGUAGE AND LITERATURE.

First term.—MILTON'S Comus and BACON'S Essays (selected). Two lectures a week. English Composition, one lecture a week.

Second term.—English Literature, previous to Elizabethan Period.

CHEMISTRY.—Lectures, chiefly on Elementary and Inorganic Chemistry, with Experiments in the Class-Room, and Laboratory work if desired; the whole preparatory to the course in Natural Science.

FRENCH.—DAREY, Principes de Grammaire française.—LAFONTAINE, Choix de Fables.—MOLIÈRE, L'Avare—Dictation; Colloquial exercises.

Or, instead of French, either of the following:—

GERMAN.—VANDERSMISSEN'S AND FRASER'S German Grammar. Adler's Progressive German Reader (selections from Sections 1 and 2). Translations, oral and written. Dictation. Colloquial exercises.

HEBREW.—(For Theological Students only). *Elementary Course.*—Reading and Grammar, with oral and written exercises in Orthography and Etymology.—Translation and Grammatical Analysis of Genesis. —*Text-Books:*—HARPER'S Elements of Hebrew; and Introductory Hebrew Method and Manual.

SECOND YEAR.

GREEK.—PLATO.—Apology. Xenophon.—Memorabilia, Bk. I., Chaps. I.,II. History of Greece.

LATIN.—HORACE.—Epistles, Bk. I., 1, 2 and 6; Livy, Bk. XXI. Translation at sight and Latin Prose Composition.

MATHEMATICS.—Arithmetic, Euclid, Algebra and Trigonometry as before.—Logarithms.—Plane Trigonometry, including solution of triangles and applications.

MATHEMATICAL PHYSICS.—Mechanics, one lecture a week.

ENGLISH LITERATURE.—A period of English Literature and one play of Shakspere. During the Session of 1891-92—The leading poets of the nineteenth century. SHAKSPERE, A Midsummer Night's Dream. [Clarendon Press Edition.]

PSYCHOLOGY AND LOGIC.—First Term.—Elementary Psychology (*Text Book* :—MURRAY'S Handbook of Psychology, Book I). Second Term.—Logic (*Text-Book* :—JEVONS' Elementary Lessons in Logic).

BOTANY.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology. *Text-Books* :—Gray's Structural Botany.

FRENCH.—Ponsard, l'Honneur et l'Argent. RACINE, Esther—CONTANSEAU, Précis de Littérature Française depuis son origine jusqu'à la fin du XVIIIe siècle. Translation into French :—DR. JOHNSON, Rasselas. Dictation. Parsing. Colloquial exercises.

Or, instead of French, either of the following :—

GERMAN.—VANDERSMISSEN'S AND FRASER'S German Grammar. ADLER'S Progressive German Reader (selections from Sections 3—5). Immermann, Der Oberhof. Dictation. Colloquial exercises. Translations, oral and written. Parsing.

HEBREW.—(For Theological Students only.)—*Intermediate Course.*—Grammar.—Dr. Harper's "Elements and Methods."—Translation from Genesis.—Exodus, Deuteronomy.—Exercises :—Hebrew into English, and English into Hebrew.—Syntax.—Reading of the Masoretic notes.

For the Intermediate Examination see § IV.

THIRD YEAR.

GREEK.—LYSIAS.—Contra Eratosthenem.
ÆSCHYLUS.—Septem contra Thebas.

Or, instead of Greek :—

LATIN.—JUVENAL.—Satires VIII. and III.
Pliny—Select Letters.
Latin Prose Composition.

NATURAL PHILOSOPHY.—MATHEMATICAL PHYSICS.—GALBRAITH AND HAUGHTON'S Mechanics, viz., *Statics*, First 3 chapters, omitting sec. 5, chapter I., and sec. 21, chapter II.; *Dynamics*, subjects of the First 5 chapters. GALBRAITH AND HAUGHTON'S Hydrostatics.

In addition to the above, the Student must take three subjects out of the two following divisions, headed Literature and Science respectively, the selection being at the option of the Student, provided two be taken from one division and one from the other.

I. Literature, &c.

LATIN OR GREEK.—As above, according as Greek or Latin has been chosen previously.

ENGLISH AND RHETORIC.—*A.* CHAUCER'S Prologue to Canterbury Tales, ed Morris. *B.* BAIN'S Rhetoric.

MENTAL PHILOSOPHY.—First Term :—The Logic of Induction, as in MILL'S System of Logic, Book III. Second Term :—The Psychology of Cognition, as in MURRAY'S Handbook of Psychology, Book II., Part I.

FRENCH.—(If taken in the first two years).—CORNEILLE, Le Cid.—Cogery —Third French course. Translation into French :—Johnson, Rasselas. French Composition. Dictation.—CONTANSEAU, Précis de Littérature Française, depuis le XVIIIe siècle jusqu'à nos jours.

GERMAN.—(If taken in the first two years.)—VANDERSMISSEN'S AND FRASER'S German Grammar. SCHILLER, Siege of Antwerp. LESSING, Minna von Barnhelm. History of German Literature from the earliest periods to the close of the 18th century (a brief survey). German composition. Dictation.

HEBREW.—(For Theological Students).—*Advanced Course.*—Gesenius' Grammar —Harper's Elements of Syntax. Exercises continued.—Translation, Reading of the Masoretic notes.—Isaiah ; Psalms ; Job ; Ecclesiastes ; Jeremiah.

II. Science.

† OPTICS AND DESCRIPTIVE ASTRONOMY.—Optics (Galbraith and Haughton). Descriptive Astronomy (Lockyer's Elementary Astronomy), English edition ; first three chapters. Students are recommended to use with this an "Easy Guide to the Constellations," by Gall.

† EXPERIMENTAL PHYSICS.—Electricity, Magnetism, and Sound ; or, Light and Heat ; as in Ganot's Treatise.

ZOOLOGY AND PALÆONTOLOGY.—Elements of Animal Physiology, Classification of Animals. Characters of the Classes and Orders of Animals, with Recent and Fossil Examples, taken as far as possible from Canadian Species. Demonstrations in the Museum. *Text-Book.*—Dawson's Hand-book of Zoology.

FOURTH YEAR.

GREEK.—ÆSCHINES.—Contra Ctesiphontem.

Or, instead of Greek :—

LATIN.—TACITUS.—Annals, Book I.
Latin Prose Composition.

NATURAL PHILOSOPHY.—*Mathematical Physics.* Mechanics and Hydrostatics (as in Third Year), or Astronomy (GALBRAITH AND HAUGHTON) and Optics (GALBRAITH AND HAUGHTON).

MORAL PHILOSOPHY.—First Term.—The Psychological Basis of Ethics. Second Term.—Ethics Proper, comprising the elementary principles of Jurisprudence and Political Science. *Textbook:* Murray's Introduction to Ethics. The Students are required to write occasional essays on Philosophical subjects.

In addition to the preceding, the Student must take three subjects out of the two following divisions (headed Literature and Science respectively), the selection being at the option of the Student, provided all three are not taken out of the same division.

I. Literature, etc.

LATIN OR GREEK.—As above, according as Greek or Latin has been taken above.

HISTORY.—Lectures on the History of Europe from the downfall of the Roman Empire of the West to the Reformation. *Text-Books:* MYERS, Mediæval and Modern History, pp. 1–398. BRYCE, Holy Roman Empire (omit chaps. 6, 8, 9, 13, and supplementary chapter).

FRENCH.—(If taken in Third Year.)—BONNEFON, Les Ecrivains modernes de la France.—Translation into French.—Morley's Ideal Commonwealths. Dictation.—CORNEILLE, Le Cid.

GERMAN.—(If taken in Third Year.)—German Grammar and Composition. Dictation. Goethe, Aus meinen Leben; SCHILLER, Wallenstein. Outlines of German Literature. GOSTWICK & HARRISON (Chapters 15–24).

HEBREW.—(For Theological Students.)—Advanced Course continued.

II. Science.

†ASTRONOMY AND OPTICS.—If not chosen as above.

†EXPERIMENTAL PHYSICS.—Light and Heat; or Electricity, Magnetism and Sound, as in GANOT's Treatise.

MINERALOGY AND GEOLOGY.—1. *Mineralogy and Petrography.* Minerals and rocks, especially those important in Geology or useful in the Arts. 2. *Stratigraphy, Chronological Geology and Palæontology.*—Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America. *Text-Book.*—Dawson's Handbook of Canadian Geology.

For the B.A. Examinations see § IV.

† Students claiming exemptions (see § V.) cannot count these subjects for the B.A. if they have not taken the Third Year Mathematical Physics.

NOTES ON THE ORDINARY COURSE FOR B.A.

Instead of two distinct subjects in one of the above divisions in either Third or Fourth Year, the Student may select one subject only, together with an *Additional Course* in the same or any other of his subjects in which such Additional Course may have been provided by the Faculty, under the above rules, provided he has been placed in the first class in the corresponding subject at the preceding Sessional Examination (viz., Intermediate or Third Year, according to standing).

The Additional Course is intended to be more than equivalent, in the amount of work involved, for any of the other subjects in the division.

(For details of additional courses provided see under Section XII.)

Undergraduates are required to study either French or German for two years viz., in the First and Second Years), taking the same language in each year. (Any Student failing to pass the Examination at the end of the Second Year will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other lectures, attendance on which is optional.

Students who intend to join any Theological School, on giving written notice to this effect at the beginning of the First Year, may take Hebrew instead of French or German.

Undergraduates who have been previously Partial or Occasional Students, and have in that capacity attended a particular Course or Courses of Lectures, may, at the discretion of the Faculty, be exempted from further attendance on these Lectures; but no distinction shall in consequence be made between the Examination of such Undergraduates and of those regularly attending Lectures.

HONOUR COURSES.

1. At the examination for the degree of B.A., Honours are given in the following subjects, for which special Honour Courses are provided:—[For details see under § XII.]

1. CLASSICAL LANGUAGES AND LITERATURE.
2. MATHEMATICS AND PHYSICS.
3. MENTAL AND MORAL PHILOSOPHY.
4. ENGLISH LANGUAGE, LITERATURE AND HISTORY.
5. GEOLOGY AND OTHER NATURAL SCIENCES.
6. MODERN LANGUAGES WITH HISTORY.
7. SEMITIC LANGUAGES.

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years.

Candidates for Honours are allowed exemptions under conditions stated in § V.

§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

For Students of McGill College only.

1. There are two Examinations in each year: one at Christmas and the other at end of the Session. In each of those the Students who pass are arranged according to their answering as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B.A. takes the place of the Sessional Examination.

2. Students who fail in any subject at the Christmas Examinations are required to pass a Supplemental Examination (if permission be obtained from the Faculty) on that subject, before admission to the Sessional Examinations.

3. Undergraduates who fail in one subject at the Sessional Examinations of the first two years are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations of the first two years, or in one subject at the third year Sessional Examinations, involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. Application for a Supplemental Examination must in al cases be made to the Faculty. The time for the Supplemental Examination will be fixed by the Faculty; the examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

For Students of McGill College and of Colleges affiliated in Arts.

I. FOR THE DEGREE OF B.A.

There are three University Examinations :—The *Matriculation* at entrance ; the *Intermediate*, at the end of the Second Year ; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section I.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern Language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern Language. The subjects for the examination of 1892 are as follows :—

Classics.—Greek—Plato, Apology ; Xenophon, Memorabilia, Book I., Chaps. I. to II. Latin—Horace, Epistles, Bk. I, 1, 2 and 6.—Livy, Bk. XXI.

Latin Prose Composition, and translation at sight of Latin into English.

Mathematics.—Arithmetic.

Euclid, Books I., II., III., IV., VI., and defs. of Book V.

Algebra, to Quadratic Equations, inclusive.

Trigonometry, including use of Logarithms.

Logic.—Jevons' Elementary Lessons in Logic.

English.—Spalding's History of English Literature or Lectures (see course). A paper on the essentials of English History (Buckley). Essay on a subject to be given at the time of the Examination.

With one of the following :—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as in Gray's Text-Book, omitting the Descriptions of the Orders.
2. *French.*—Ponsard :—l'Honneur et l'Argent. Racine :—Esther. Contanseau :—Précis de la Littérature Française, from the beginning to the end of the XVIIIth century. Translation into French :—Rasselas. Grammatical questions.
3. *German.*—Vandersmissen's German Grammar ; Adler's & Fraser's Progressive Reader (selections from secs. 3 to 5) ; Immermann, Der Oberhof. Dictation. Colloquial exercises ; Translations, oral and written.
4. *Hebrew.*—Genesis—chaps. III., IV., V., VI. Exodus—chap. III. Numbers—chap. XXIII. Exercises : Hebrew into English, and English into Hebrew. Syntax. Reading of the Masoretic notes.

3. For the Final or B.A. Ordinary Examination the subjects are those appointed as obligatory in the Third and Fourth Years, viz., Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics) or Astronomy and Optics; Moral Philosophy; and those three subjects which the Candidate may have selected for himself in the Third and Fourth Years. (See § III.)

The subjects in detail for 1892 are as follows:—

1. *Greek.*—Æschines, Contra Ctesiphontem; Æschylus, Prometheus Vinctus. *Greek History.*—From the close of the Peloponnesian war to the death of Philip. (Or Latin, as follows):—
2. *Latin.*—Tacitus, Annals, Book I.; Juvenal, Satt. VIII. and XIII. *Roman History.*—The twelve Cæsars.

Mathematical Physics.

1. Mechanics and Hydrostatics, as in Galbraith & Haughton's text-books; or Optics and Astronomy, " " "

Mental and Moral Philosophy.

Murray's Introduction to Ethics.

*Lectures, with any two of the books prescribed for Part I. of the Honour work of the Fourth Year.

Natural Science.

Mineralogy and Geology, as in Dana's Manual and Dawson's Handbook of Canadian Geology.

*Practical Geology and Palæontology; or Practical Chemistry, as in § XII.

Experimental Physics.

Light and Heat (see Courses of Lectures, § XII.).

History.

Myers:—Mediæval and Modern History; Bryce's Holy Roman Empire (omit Chaps. 6, 8, 9, 13, and supplementary Chapter).

*Additional Course as in § XII.

French.

The Course of French for the Fourth Year.

*The subjects of the Additional Course as in § XII.

German.

The Course of German for Fourth Year.

*Additional Course as in § XII.

Hebrew (Theological Students).

Isaiah, chaps. XLV to XVIII inclusive. Jeremiah. Lamentations, chaps. I, II, III. Psalms XVI to XX inclusive.

Gesenius' Grammar, Harper's Elements of Syntax, Reading of the Masoretic notes.

Additional Courses (see § XII.).

For details of each subject, see Courses of Lectures, § XII.

At the B.A. Ordinary Examination of the Candidates who obtain the required aggregate of marks, only the who pass in the First Class in three of the departments, and not less than Second Class in the remainder, shall be entitled to be placed in the First Class for the Ordinary Degree.

4. Every Candidate for the Degree of B.A. is required to make and sign the following declaration:—

"Ego———polliceor sancteque recipio me, pro meis viribus, studiosum fore communis hujus Universitatis boni, et operam daturum ut ejus decus et dignitatem promoveam."

II. FOR THE DEGREE OF M.A.

1. A Candidate must be a Bachelor of Arts of at least three years standing.

Thesis.

2. He is required to prepare and submit to the Faculty a thesis on some literary or scientific subject, under the following rules:—

(*a*) The subject of the thesis must be submitted to the Faculty before the thesis is presented.

(*b*) A paper read previously to any association or published in any way cannot be accepted as a thesis.

(*c*) The thesis becomes the property of the University, and cannot be published without the consent of the Faculty of Arts.

(*d*) The thesis must be submitted before some date to be fixed annually by the Faculty, not less than two months before proceeding to the Degree.

The last day in the session of 1891-92 *for sending in Theses for M.A. will be Jan.* 31*st*, 1892.

Examination.

3. All Candidates, except those who have taken First Rank B.A. Honours (or Second Rank B.A. Honours in or after 1889), or have passed First Class in the Ordinary Examinations for the Degree of B.A., are required to pass an examination also, either in Literature or in Science, as each Candidate may select.

(*a*) The subjects of the Examination in *Literature* are divided into two groups, as follows :—

Group A.—1. Latin. 2. Greek. 3. Hebrew.

Group B.—1. French. 2. German. 3. English.

(*b*) The subjects for the Examination in *Science* are divided into three groups :—

Group A.—1. Pure Mathematics (Advanced or Ordinary). 2. Mechanics (including Hydrostatics). 3. Astronomy. 4. Optics.

Group B.—1. Geology and Mineralogy. 2. Botany. 3. Zoology. 4. Chemistry.

Group C.—1. Mental Philosophy. 2. Moral Philosophy. 3. Logic. 4. History of Philosophy.

(*c*) Every Candidate in Literature is required to select two subjects out of one group in the Literary section, and one out of the other group in the same section for the Examination. Every Candidate in Science is required to select two out of the three groups in the Scientific section ; and in one of the groups so chosen to select two subjects, and in the other group one subject for Examination.

(*d*) One of the subjects selected as above will be considered the principal subject (being so denoted by the Candidate at the time of application), and the other two as subordinate subjects.

For further details of the Examination, application must be made to the Faculty before the above date. For fees see § XI.

(*See also Appendix*).

III. FOR THE DEGREE OF LL.D.

Candidates must be Masters of Arts of at least twelve years standing. Every Candidate for the Degree of LL.D. in course is required to prepare and submit to the Faculty of Arts, not less than three months before proceeding to the degree, twenty-five printed copies of a Thesis on some Literary or Scientific *subject previously approved* by the Faculty, and possessing such a degree of Literary or Scientific merit, and evidencing such originality of thought or extent of research as shall, in the opinion of the Faculty, justify it in recommending him for that degree.

N.B.—The subject should be submitted before the Thesis is written.

Every Candidate for the Degree of LL.D. in Course is required to submit to the Faculty of Arts, with his Thesis, a list of books, treating of some one branch of Literature or of Science, satisfactory to the Faculty, in which he is prepared to submit to examination, and on which he shall be examined, unless otherwise ordered by vote of the Faculty. For fees see § XI.

§ V. SPECIAL PROVISIONS FOR CANDIDATES FOR HONOURS AND FOR PROFESSIONAL STUDENTS.

The Honour lectures are open to Undergraduates only, and no Undergraduate is permitted to attend unless (*a*) he has been placed in the First Class in the subject at the preceding Sessional Examination, if there be one, and has (*b*) satisfied the Professor that he is otherwise qualified.

(*c*) While attending lectures his progress must be satisfactory to the Professor. If not satisfactory, he may be notified by the Faculty to discontinue attendance.

I. Candidates for Honours in the Second Year.

Candidates for Honours in the Second Year who have obtained Honours in the First Year may omit the lectures and examinations either in Modern Languages (or Hebrew) or Botany, giving notice of the subject at the beginning of the session.

II. Candidates for Honours in the Third Year.

Every Candidate for Honours in the Third Year must, in order to obtain exemptions, have passed the Intermediate Examination, and must in the Examinations of the Second Year have taken First Rank Honours, if Honours be offered in the subject, or, if not, First Class at the Ordinary Sessional Examinations in the subject in which he proposes to compete for Honours, and be higher than Third Class in the majority of the remaining subjects; such Candidates shall be entitled in the Third Year to exemption from lectures and examinations in any one of the subjects required by the general rule (see § III), except that in which he is a Candidate for Honours. A Candidate for Honours in the Third Year who has failed to obtain Honours shall be required to take the same examinations for B.A. as the ordinary Undergraduates.

III. Candidates for B.A. Honours.

A Student who has taken Honours of the first rank in the Third Year, and desires to be a Candidate for B.A. Honours, shall be required to attend two only of the courses of lectures given in the ordinary departments, and to pass the two corresponding examinations only at the ordinary B.A. Examination. Candidates, however, who at the B.A. Examinations obtain Third Rank Honours, will not be allowed credit for these exemptions at the end of the Session, unless the Examiners

certify that the knowledge shown of the whole Honour Course (Part II. as well as Part I.) is sufficient to justify it. A Student who has taken Second Rank Honours in the Third Year, and desires to be a Candidate for B.A. Honours in the same subject, shall be allowed to continue in the Fourth Year the study of the same departments that he has taken in the Third Year, but shall be required to take the same number of subjects as in the Ordinary Course

NOTE.—For subjects of Ordinary Course see III.

IV. Professional Students.

Students of the Third and Fourth Years, matriculated in the Faculties of Law, Medicine, or Applied Science of the University, or in any affiliated Theological College, are entitled to exemption from any one of the Ordinary subjects required in the Third and Fourth Years. (For rule concerning "Special Certificates," see § VI.)

To be allowed these privileges in either year, they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim exemptions as Professional Students, and must produce at the end of the Session certificates of attendance on a full course of Professional Lectures during the year for which the exemption is claimed.

V. Students of the University attending Affiliated Theological Colleges.

1. Such Students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts in the same manner as other Students.

2. The Faculty will make formal reports to the Governing body of the Theological College which any such Students may attend, as to:—(1) their conduct and attendance on the classes of the Faculty; and (2) their standing in the several examinations; such reports to be furnished after the Christmas and Sessional Examinations severally, if called for.

3. Undergraduates are allowed no exemptions in the course for the degree of B.A. until they have passed the Intermediate Examination; but they may take Hebrew in the First or Second Years, instead of French or German.

4. In the Third and Fourth Years they are allowed exemptions, as stated above.

*Any Student who, under any of the above rules, desires to take Experimental Physics, is required to take Mechanics and Hydrostatics also, in the Third Year.

---

§ VI. MEDALS, HONOURS, PRIZES, AND CLASSING.

1. Gold Medals will be awarded in the B.A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the

Ordinary Examinations for the Degree of B.A., provided they have been recommended therefor to the Corporation by the Faculty on the report of the Examiners:—

The *Henry Chapman Gold Medal*, for the Classical Languages and Literature.

The *Prince of Wales Gold Medal*, for Mental and Moral Philosophy.

The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.

The *Shakespeare Gold Medal*, for the English Language, Literature and History.

The *Logan Gold Medal*, for Geology and other Natural Sciences.

Major Hiram Mills Gold Medal, for a subject to be chosen by the Faculty from year to year.

If there be no Candidate for any Medal, or if none of the Candidates fulfil the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes on the subject for which the Medal was intended. For details, see announcements of the several subjects below.

2. HONOURS of First, Second or Third Rank will be awarded to those Undergraduates who have successfully passed the Examinations in any Honour Course established by the Faculty, and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

The Honour Examinations are each divided into two parts, separated by an interval of a few days, under the following regulations:—

(*a*) No Candidate will be admitted to Part II., unless he has shown a thorough and accurate knowledge of the course appointed for Part I.

(*b*) The names of the successful Candidates in Part I. will be announced before Part II. begins.

(*c*) First or Second Rank Honours will be awarded to those Candidates only who are successful in Part II.

(*d*) Third Rank Honours will be awarded to those who are successful in Part I. alone.

By an Order of the Lieutenant-Governor of Ontario in Council, Honours in this University confer the same privileges in Ontario as Honours in the Universities of that Province, as regards certificates of eligibility for the duties of Public School Inspectors, and as regards exemption from the non-professional Examination of Teachers for first-class Certificates for Grades "A and B."

3. SPECIAL CERTIFICATES will be given to those Candidates for B.A. who shall have been placed in the First Class at the ordinary B.A. Examination. The Candidates must have obtained three-fourths of the maximum marks in the aggregate of the studies proper to their year, be in the First Class in not less than half the subjects, and have no Third Class. At this examination, no Candidate who has taken exemptions (see § V.) can be placed in the First Class, unless he has obtained First Class in each of the departments in which he has been examined.

4. CERTIFICATES of High General Standing will be granted to those Undergraduates of the first two years who have obtained three-fourths of the maximum marks in the aggregate of the Studies proper to their year, are in the First Class in not less than half the subjects, and have not more than one Third Class. In the Third Year the conditions are the same as for the Special Certificate for B.A.

5. PRIZES OR CERTIFICATES to those Undergraduates who may have distinguished themselves in the studies of a particular class and have attended all the other classes proper to their year.

6. His Excellency Lord Stanley has been pleased to offer a GOLD MEDAL for the study of Modern Languages and Literature, with History, or for First Rank General Standing, as may be announced.

(*a*) The Regulations for the former are as follows :—

(1) The subjects for competition shall be French and German, together with the History part of the present Honour Course for the Shakespeare Medal.

(2) The Course of study shall extend over two years, viz., the Third and Fourth Years.

(3) The successful Candidate must be capable of speaking and writing both languages correctly.

(4) There shall be examinations in the subjects of the course in both the Third and Fourth Years, at which Honours may be awarded to deserving Candidates.

(5) The general conditions of competition, and the privileges as regards exemptions, shall be the same as for the other Gold Medals in the Faculty of Arts.

(6) Students from other Faculties shall be allowed to compete, provided they pass the examinations of the Third and Fourth Years in the above subjects.

(7) Candidates desiring to enter on the Third Year of the Course, who have not obtained first-class standing at the Intermediate or Sessional Examinations of the Second Year in Arts, are required to pass an examination in the work of the first two years of the Course in Modern Languages, if called on to do so by the Professors.

(8) The subjects of Examination shall be those of the Honour Course in Modern Languages.

(*b*) The Regulations for the Gold Medal, if awarded for First Rank General Standing, are as follows :—

(1) The successful Candidate must take no exemptions or substitutions of any kind, whether Professional or Honour, in the Ordinary B.A. Examinations.

(2) He shall be examined in the following subjects :—

(*a*) *Classics* (both languages); (*b*) *Mixed Mathematics :—Mechanics, Hydrostatics, Optics, Astronomy ;* (*c*) *Moral Philosophy ;* and any *two* of the following subjects, or any *one* of them with its Additional Course ; (*d*) Natural Science ; (*e*) Experimental Physics ; (*f*) English and History ; (*g*) French ; (*h*) German.

(3) His answering must satisfy special conditions laid down by the Faculty.

(4) The same Candidate cannot obtain the Gold Medal for First Rank General Standing, and also a Gold Medal for first Rank Honours.

7. The Neil Stewart Prize of $18 is open to all Undergraduates of this, and also to Graduates of this or any other University studying Theology in any College affiliated to this University, under the following rules :—

(1) The prize will not be given for less than a thorough examination in Hebrew Grammar passed in the First Class, in reading and translating the Pentateuch, and such poetic portions of the Scriptures as may be determined.

(2) In case competitors should fail to attain the above standard, the prize will be withheld, and a prize of $36 will be offered in the following year for the same.

[Course for the present year :—Hebrew Grammar (Gesenius) ; Translation and analysis of Exodus ; Job ; Malachi.]

(3) There will be two Examinations of three hours each—one in Grammar and the other in Translation and Analysis.

The Prize, founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, was re-established by the liberality of the late Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next session.

8. Early English Text Society's Prize.—The prize, the annual gift of the Early English Text Society, will be awarded for proficiency in (1) Anglo-Saxon, (2) Early English before Chaucer.

The subjects of Examination will be :—

(1) The Lectures of the Third and Fourth Years on Anglo-Saxon.

(2) Specimens of Early English, Clarendon Press Series, ed. Morris and Skeat, Part II., A.D. 1298—A.D. 1393. The Lay of Havelock the Dane (Early English Text Society, ed. Skeat).

9. New Shakspere Society's Prize.—This Prize, the annual gift of the New Shakspere Society, open to Graduates and Undergraduates, will be awarded for a critical knowledge of the following plays of Shakspere :—

Hamlet ; Macbeth ; Othello ; King Lear.

10. "Charles G. Coster Memorial Prize."—This Prize, intended as a tribute to the memory of the late Rev. Charles G. Coster, M.A., Ph.D., Principal of the Grammar School, St. John, N.B., is offered by Colin H. Livingstone, Esq., B.A., to the Undergraduates (men or women) from the Maritime Provinces, Nova Scotia, New Brunswick and Prince Edward Island. In April, 1892, it will be awarded to that Undergraduate of the First or Second or Third Year, from the above Provinces, who in the opinion of the Faculty has passed the most satisfactory Sessional Examinations.

11. Science Scholarships granted by Her Majesty's Commission for the Exhibition of 1851.—These Scholarships of £150 sterling a year in value are tenable for two, or, in rare instances, three years. They are limited, according to the Report of the Commission " to those branches of Science (such as Physics, Mechanics and Chemistry), the extension of which is specially important for our national industries." Their object is, not to facilitate ordinary collegiate studies, but " to enable students to continue the prosecution of science with the view of aiding in its advance, or in its application to the industries of the country."

A nomination to one of these scholarships for the year 1891 has been placed by the Commission, at the disposal of McGill University, and another may be granted for the year 1893.

It is open to students of not less than three years standing in the Faculties of Arts or Applied Science, and is tenable at any University or at any other Institution approved by the Commission.

12. The names of those who have taken Honours, Certificates or Prizes will be published in order of merit ; with mention, in the case of Students of the First and Second Years, of the schools in which their preliminary education has been received.

§ VII. LICENSED BOARDING HOUSES.

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep boarding-houses shall produce evidence satisfactory to the Principal as to their character and fitness, and the suitability of the house for the health and comfort of the Students. They shall also supply him with a statement of charges.

3. The keeper of the boarding-house shall report immediately to the Principal the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct :—

1. A Class-book shall be kept by each Professor or Lecturer, in which the presence or absence of Students shall be carefully noted; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Each Professor shall call the roll immediately at the beginning of the lecture. Credit for attendance on any lecture may be refused on the grounds of lateness, inattention or neglect of study, or disorderly conduct in the class-room. In the case last mentioned the Student may, at the discretion of the Professor, be required to leave the class-room. Persistence in any of the above offences against discipline, after admonition by the Professor, shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

3. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

4. While in the College, or going to or from it, Students are expected to conduct themselves in the same orderly manner as in the Class rooms. Any Professor observing improper conduct in the College buildings or grounds may admonish the Student, and, if necessary, report him to the Dean.

5. Every Student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain, without as well as within the walls of the College, a good moral character.

6. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, impose fines, disqualify from competing for prizes or honours, suspend from Classes, or report to the Corporation for expulsion.

7. Any Student who does not report his residence on or before November 1st in each year is liable to a fine of one dollar.

8. Any Student injuring the furniture or buildings will be required to repair the same at his own expense, and will, in addition, be subject to such other penalty as the Faculty may see fit to inflict.

9. All cases of discipline involving the interest of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or, in his absence, to the Vice-Principal.

[NOTE.—All Students are required to appear in Academic dress while in or about the College building. Students are requested to take notice that petitions to the Faculty on any subject cannot, in general, be taken into consideration, except at the regular meetings, appointed in the Calendar.]

---

§ IX. LIBRARY.

Extract from the Regulations.

1. The books in the Library are classed in two divisions:—1st, Those which may be lent; and 2nd, those which may not, under any circumstances, be removed from the Library. The classification shall be determined by the Librarian.

2. Students in the Faculty of Arts or of Applied Science, who have paid the Library fee, may borrow books on depositing the sum of $5 with the Bursar, which deposit, after the deduction of any fines due, will be repaid at the end of the Session on the certificate of the Librarian or his assistant that the books have been returned uninjured.

3. Students may borrow not more than three volumes at one time, except on the recommendation in writing of a Professor for specified books, and must return them within two weeks, on penalty of a fine of 5 cents a volume for each day of detention. An additional deposit of $4 entitles a Student to borrow two extra volumes.

4. A Student incurring fines beyond the sum total of $1 shall be debarred the use of the Library until they have been paid.

5. Any volume, or volumes, lost or damaged by any person, shall be replaced or paid for at such rates as the Library Committee may direct; and such rate of payment shall be determined by the value of the book itself, or of the set to which the volume belongs.

6. Graduates in any of the Faculties, on making a deposit of $5, are entitled to the use of the Library, subject to the same rules and conditions as Students: but they are not required to pay the annual Library fee.

7. Graduates residing beyond the City limits, and applying for the loan of books from the Library, shall not receive such books without the sanction of the Honorary Librarian, and depositing the value of the books with the Bursar of the College.

8. Members of the McGill College Book Club, on presenting annually a certificate of their membership, are by a special regulation of Corporation entitled to the use of the Library on the same conditions as Graduates, but they are not required to make a deposit.

9. Students in the Faculties of Law and Medicine, who have paid the Library fee to the Bursar, may read in the Library, and, on depositing the sum of $5 with the Bursar, may borrow books on the same conditions as Students in Arts. They are required to present their Matriculation Tickets to the Bursar and to the Librarian or his assistant.

10. Persons not connected with the College may consult books in the Library on obtaining an order from any of the Governors, or from the Principal, or the Dean of the Faculty of Arts or of Applied Science, or from any of the Professors in the said Faculties. Donors of books or money to the amount of Fifty dollars may at any time consult books on application to the Librarian.

11. The Library is kept open from 9 a.m. to 4 p.m. daily, and no person shall be allowed in the Library, except during these hours.

12. No person, other than the Librarian and the assistants, is allowed to enter the alcoves, or to take down books from the shelves, except members of Corporation, and Professors, or those whom any of the above may accompany personally.

13. A person desiring to read or to borrow a book, which he has ascertained from the Catalogue to be in the Library, will fill up one of the blank forms provided for Readers and Borrowers respectively, and hand it to the Library Assistant, who will thereupon procure him the book.

14. Readers must return the books they have obtained to the Library Assistant before leaving the Library.

15. No conversation is permitted in the Library.

---

§ X. PETER REDPATH MUSEUM.

1. The Museum will be open every lawful day from 9 a.m. till 5 p.m., except when closed for any special reason by order of the Principal or Committee.

2. Students will obtain tickets of admission from the Principal on application.

3. Students will enter by the front door only, except when going to lectures.

4. Any Students wilfully defacing or injuring specimens, or removing the same, will be excluded from access to the Museum for the Session.

§ XI. FEES.

All fees and fines are payable to the Bursar of the College.

I. *Undergraduates.*

(Undergraduates matriculated before April, 1891, are subject to the old scale of fees only.)

Matriculation (First Year)	$5 00
(In second year $7.50.)	
Tuition Fee (per session)	30 00
Special Fees, including Library, Museum, Gymnasium, Ordinary Examinations and annual Registration	15 00

[Total per session $50.00 in First Year and $45.00 in subsequent years.]

II. *Partial Students.*

Matriculation Fee (First year)	5 00
Tuition Fee (not exceeding 4 classes)	30 00
Tuition Fee, separate classes (each)	10 00
Special Fees, Library, Gymnasium, Museum, Ordinary Examinations and Registration (or for each separately $5.00)	15 00

III. *Occasional Students.*

Tuition Fee, for each class	10 00
Special Fees (optional) as for Partial Students.	
Examination in any subject	2 00

IV. *Miscellaneous.*

Laboratory and Practical Classes, viz., *Chemistry*, *Botany*, *Physics*, each per session	$10 00
Petrography	5 00
Supplemental Examinations	2 00
Fee for a certificate of standing if granted to a Student on application	1 00
Fee for a certificate of standing, if accompanied by a statement of classification in the several subjects of examination	2 00
Examination Fee for Students of Affiliated Theological Colleges, who present themselves for the entrance examination without intending to become Undergraduates	10 00
Supplemental Examination, when granted at any other time than that fixed by the Faculty	5 00
Matriculation Certificate, for Students intending to enter the Medical Faculty	2 50

N.B.—The lectures in one subject in any one of the four college years constitute a "Course."

Graduates in Arts are allowed to attend, without payment of fees, all lectures, except those noted as requiring a special fee.

The fees must be paid the Secretary, and the tickets shown to the Dean, within a fortnight after the commencement of attendance in each session. In case

of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty, and on payment of a fine of $2.

[All fines are applied to the purchase of books for the Library.]

Fee for the Degree of B.A.	$ 10 00
" " " *M.A.*	10 00*
" " " *LL.D.*	50 00*

If the Degree of M.A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is $25.00.

The B.A. fee must be paid before the Examination.

The M.A. or LL.D. fee must be sent with the Thesis to the Secretary of the University. This is a condition essential to the reception of the application. The Secretary will then forward the Thesis to the Dean of the Faculty.

*A Bachelor of Arts or a Master of Arts, intending to proceed to a higher Degree, is required, *in addition* to the above, to keep his name on the books of the University, by the annual payment of a fee of $2 to the Registrar of the University. He may, if he prefer it, compound for the above annual fees, by the payment of $6 in one sum for the Master's Degree, or $30 for the Doctor's Degree, on or before the date of application for the Degree.

Extract from the Regulations of the Board of Governors for Election of Fellows under Chap. V. of the Statutes of the University.

" From and after the graduation of 1888 all new Graduates shall " pay a Registration Fee of $2.50 at the time of their graduation, " and in addition to the Graduation Fee; and shall be entered in " the University list as privileged to vote, and shall have voting " papers mailed to them by the Secretary."

---

§ XII. COURSES OF LECTURES.

I. ORDINARY COURSE.

1. CLASSICAL LITERATURE AND HISTORY.

(Major H. Mills Professorship of Classics.)

Professor, Rev. G. Cornish, M.A., LL.D.

Asst. Prof., A. J. Eaton, M.A., Ph. D.

GREEK.

First Year.—Homer.—Iliad, Book XXII. Xenophon.—Cyropaedeia, Book I.

Second Year.—Plato.—Apology. Xenophon.—Memorabilia, Bk. I., Chaps. I-II.
—Cox's General History of Greece (to the Peloponnesian War).

Third Year.—Lysias.—Contra Eratosthenem. Æschylus.—Septem Contra Thebsas.

Fourth Year.—Æschines.—Contra Ctesiphontem.

LATIN.

First Year.—Cicero.—Select Orations. Virgil.—Aeneid, Bk. X. Latin Prose Composition with exercises based upon Nepos (Themistocles) and Caesar (Bk. II, Chaps. 14-28).—Bender's Roman Literature.—Mommsen's History of Rome (abridged), Chaps. I-XI.

Second Year.—Livy, Bk. XXI.—Horace, Epistles, Bk. I. 1, 2 and 6.—Translation at sight of passages from Cicero and Livy, and Latin Prose Composition based upon selections from the same authors.

Third Year.—Juvenal.—Satires III. and VIII. Pliny, Select Letters. Latin Prose Composition.

Fourth Year.—Tacitus.—Annals, Book I. Latin Prose Composition.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages, and to Prosody and Accentuation.

The Latin pronunciation adopted in the lectures is based on the scheme issued by the Cambridge Philological Society (London: Trubner & Co.).

In Greek, the system of pronunciation, outlined in the preface of Goodwin's Greek Grammar, is recommended to the attention of Students.

Number of lectures in Fourth Year—two weekly, or, at the discretion of the Professor, three.

2. ENGLISH LANGUAGE AND LITERATURE.

(Molson Professorship.)

Professor, Chas E. Moyse, B.A.
Lecturer, Paul T. Lafleur, M.A.

First Year.—English Language and Literature. Three lectures a week. Until Christmas the work of the Class will partly consist of exercises in English Composition. Two lectures a week will be given to the study of English Classics. Milton's Comus and a portion of Bacon's Essays have been selected for the Session of 1891-92. After Christmas there will be a course of about thirty lectures on English Literature previous to the Elizabethan Period. Students are recommended to use Prof. Henry Morley's Charts of English Literature, and to read the first chapter of Henry Morley's English Writers (Cassell 1887).*

Second Year.—A period f English Literature and one play of Shakespeare. One Lecture a week before Christmas; two lectures a week after Christmas. During the session f 1891-92, the leading poets of the Nineteenth Century will form the subject of the Lectures. Shakespeare—A Midsummer Night's Dream. (Clarendon Press Edition.)

Third Year.—*A.* Chaucer's Prologue to Canterbury Tales. Lecture once a week; *Text-Book:*—Chaucer's Prologue, etc., ed. Morris. *B.* Rhetoric. Lecture once a week; *Text-Book:*—Bain's Rhetoric.

Fourth Year.—History. The lectures (once a week) will be a sketch of general European History from the fall of the Roman Empire of the West to the discovery of the New World. The use of Professor Nichol's Tables of European History is recommended.

---

3. MENTAL AND MORAL PHILOSOPHY.

(John Frothingham Professorship of Mental and Moral Philosophy.)

Professor, Rev. J. Clark Murray, LL.D.

Lecturer, Paul T. Lafleur, M.A.

Second Year.—First term.—Elementary Psychology. (*Text-Book:*—Murray's Handbook of Psychology, Book I.) Second Term.—Logic. (*Text-Book:*—Jevons' Elementary lessons in Logic.)*

Third Year.—First Term:—The Logic of Induction, as in Mill's System of Logic, Book III. Second Term:—The Psychology of Cognition, as in Murray's Handbook of Psychology, Book II, Part I.

Fourth Year.—First Term:—The Psychological Basis of Ethics Second Term.—Ethics Proper, comprising the elementary principles of Jurisprudence and Political Science. *Textbook:*—Murray's Introduction to Ethics.

In the Third and Fourth Years Students are also required to write occasional essays on Philosophical subjects.

For Additional Courses see Honour Course.

---

* The prizes are awarded on the work of the whole Session.

---

4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. Darey, M.A., B.C.L., LL.D., Officier d'Académie.

First Year.—Darey.—Principes de Grammaire Française. Lafontaine.—Choix de fables. Molière—l'Avare. Dictation. Colloquial exercises.

Second Year.—Racine. Esther. Ponsard—l'Honneur et l'Argent. Contanseau.—Précis de Littérature Française, depuis son origine jusqu'à la fin du XVIIIe siècle. Translation into French:—Dr. Johnson.—Rasselas. Dictation. Parsing. Colloquial exercises.

Third Year.—Corneille.—Le Cid. Cogery.—Third French course. Translation into French:—Johnson.—Rasselas. Dictation. Contanseau.—Précis de Littérature Française, depuis le XVIIIe siècle jusqu'à nos jours.

Fourth Year.—Cogery.—Third French course. Bonnefon.—Les Ecrivains modernes de la France. Translation into French:—Morley.—Ideal Commonwealths. French Composition. Dictation. Corneille.—Le Cid.

For Additional Courses see Honour Lectures.

The Lectures in the Third and Fourth Years are given in French.

5. GERMAN LANGUAGE AND LITERATURE.

Lecturer :—P. Toews, M.A.

First Year.—Vandersmissen's and Fraser's German Grammar. Adler's Progressive German Reader (selections from Sections 1 and 2). Translations, oral and written. Dictation. Colloquial exercises.

Second Year.—Vandersmissen's and Fraser's German Grammar. Adler's Progressive German Reader (selections from Sections 3-5). Immermann; Der Oberhof. Parsing. Dictation. Colloquial exercises. Translations, oral and written.

Third Year.—Vandersmissen's and Fraser's German Grammar. Lessing, Minna von Barnhelm; Schiller, Siege of Antwerp. History of German Literature from the earliest periods to the close of the 18th century (a brief survey). German Composition. Dictation.

Fourth Year.—German Grammar and Composition. Goethe:—Aus meinen Leben; Schiller, Wallenstein. Outlines of German Literature:—Gostwick and Harrison (Chapters 15-24).

For Additional Courses see Honour Lectures.

---

6. HEBREW AND ORIENTAL LITERATURE.

Professor, Rev. D. Coussirat, B.A., B.D., Officier d'Académie.

Elementary Course.—Reading and Grammar, with oral and written exercises in Orthography and Etymology.—Translation and Grammatical Analysis of Genesis.—*Text-Books:*—Harper's Elements of Hebrew; and Introductory Hebrew Method and Manual.

Intermediate Course.—Grammar.—Dr. Harper's "Elements and Method."—Translation from the Hebrew Bible.—Exercises.—Hebrew into English, and English into Hebrew.—Syntax.—Reading of the Masoretic Notes.

Advanced Course.—Gesenius' Grammar, and Harper's Elements of Syntax.—Exercises continued.—Translation from the Hebrew Bible. Reading of the Masoretic Notes.

The course comprises Lectures on the above Language and its Literature in particular with a general notice of the other Oriental Languages, its genius and peculiarities. Comparative Philology, affinity of Roots, etc., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, etc.

For Additional Courses see Honour Lectures.

---

7. MATHEMATICS AND NATURAL PHILOSOPHY.

(Peter Redpath Professorship of Natural Philosophy.)

Professor, Alexander Johnson, M.A., LL.D.

In the ordinary work of the First Year, assistance will be given by G. H. Chandler, M.A., Professor of Practical Mathematics in the Faculty of Applied Science.

First Year.—MATHEMATICS.—Arithmetic.—Euclid, Books 1, 2, 3, 4, 6, with definitions of Book 5 (omitting propositions 27, 28, 29 of Book 6); Todhunter's Edition—or Hall and Stevens'; the latter is recommended to Candidates for Honours especially. Colenso's Algebra (Part I) to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

Second Year.—MATHEMATICS.—Arithmetic, Euclid, Algebra and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry.

The course for the Intermediate University Examination consists of the Mathematics for the first two years.

Third Year.—MATHEMATICAL PHYSICS.—Galbraith and Haughton's Mechanics, viz.: *Statics*, first 3 chapters, omitting sec. 5, chapter I., and sec. 21, chapter II; *Dynamics*, subjects of the first 5 chapters. Galbraith and Haughton's Hydrostatics.

(*Optional but open to those only who have studied the above Mathematical Physics*).—OPTICS (Galbraith and Haughton). ASTRONOMY (Lockyer's Elementary Astronomy, English edition; first three chapters, viz., The Stars and Nebulæ; The Sun; The Solar System). Students are recommended to use with this an "Easy Guide to the Constellations," by Gall.

Fourth Year.—ASTRONOMY.—(*Optional*) Galbraith and Haughton's Astronomy.—The lectures on this subject will be given before Christmas.

---

8. EXPERIMENTAL PHYSICS.

(W. C. MCDONALD PROFESSORSHIP.)

Professor, JOHN COX, M.A.

Third Year.—Laws of Energy—Heat and Light.

Fourth Year.—Sound, Electricity and Magnetism.

In each year two hours a week will be devoted to fully illustrated experimental Lectures on the subjects named. Courses of practical work in the Physical Laboratory are arranged so that experiments, chiefly quantitative, bearing on the subjects treated in the Lectures, may be performed by the Students themselves. Opportunity is given to learn the nature and use of the principal instruments employed in the exact and practical measurement of physical quantities.

---

9. GEOLOGY, MINERALOGY AND PETROGRAPHY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor, SIR J. WM. DAWSON, C.M.G., LL.D., F.R.S., F.G.S.

B. J. HARRINGTON, B.A., Ph.D., F.G.S., Professor of Mineralogy.

FRANK D. ADAMS, M.Ap.Sc., Lecturer on Petrography and Physical Geology.

Fourth Year (1)—MINERALOGY AND PETROGRAPHY.—An elementary course, in which attention is given more particularly to such minerals and rocks as are important in Geology or useful in the Arts.

(2) Physical Geology and Stratigraphy.—Denudation and Origin of Aqueous Deposits; Volcanoes and Earthquakes; Arrangement of Rocks on the large scale; Origin of Mountains; Field Geology and Construction of Geological Maps and Sections.

(3) Chronological Geology and Palæontology.—Classification of Formations; Geological Periods; Mineralization and Classification of Fossil Remains; History of the several Periods with the Fauna and Flora of each Distribution, more especially in Canada.

Saturday excursions will be made to points of interest, and Museum demonstrations will be given.

Text-Books.—Dawson's Handbook of Geology, Dana's Manual of Mineralogy. Books of reference will be indicated in the Library.

Students in Natural History are entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

For Additional Departments see Honour Course, II., infra.

The Geology course is specially fitted to those Students who have taken the Natural Science studies of the previous years, but others are not excluded.

---

10. ZOOLOGY AND PALÆONTOLOGY.

Professor, Sir J. William Dawson, LL D., F.R.S.

Third Year.—Zoology and Palæontology. Elements of Animal Physiology. Classification of Animals. Characters of the Classes and Orders of Animals with recent and fossil examples, taken as far as possible from Canadian species,—the whole with reference to the study of Canadian animals recent and fossil. Demonstrations in the Museum. *Text-book.*—Dawson's Handbook of Zoology, with books of reference.

A prize of $20 will be given for a collection of specimens of recent or fossil animals, accurately named. The Prize collections or duplicates of them to remain in the Museum if required. Candidates must be students of Zoology of the previous session, and the prize will not be awarded except for a collection of sufficient merit, and belonging to some one class of recent animals, or the fossils of one geological system or one definite locality.

---

11. BOTANY.

Professor, D. P. Penhallow, B.Sc.

Second Year.—This course is designed to give the Students a thorough acquaintance with the principles of Morphology and Classification, the elements of Histology and the most prominent Physiological functions of the plant. The Flora of Canada will be given prominence as far as possible, and in descriptive work constant use will be made of the large Herbarium and of the Botanic Garden. So far as time will permit, weekly excursions will be made for field study of plants.

Text-Book.—Gray's Structural Botany.

For the coming year two prizes will be offered for the best collection of Canadian plants:—

The first prize of $25 is offered by Mr. H. H. Lyman; the second prize of $15 is offered by Mr. Wm. Drysdale.

The specimens must be prepared in accordance with directions to be given. Specimens collected by persons other than the actual competitors will not be admitted except when obtained by exchange. Competition is open to those students only who have taken the regular course of Botany in the previous session.

All collections will be returned after the awards are made.

Third Year.—Additional Course. *Vegetable Histology.*—Two lectures with practical work each week. Microscopical manipulations, micro-chemical reactions, general histology of Phanerogams. Microscopical Drawing.

Fourth Year.—Additional Course. *Vegetable Histology.*—Two lectures with practical work each week. A continuation of the Course in the third year embracing a study of the structure and life history of Cryptogams. No Student will be admitted to the Course in the Fourth Year without having followed that for the Third Year.

Text-Books.—Bower and Vines' Practical Botany. Gœbel's Outlines of Classification and Special Morphology.

Fee for Additional Course, $10 per session for use of instruments and reagents.

A prize will be awarded to the Student showing the greatest proficiency in the work of the two years.

---

12. CHEMISTRY.

(David J. Greenshields Professorship of Chemistry and Mineralogy.)

Professor, B. J. Harrington, B.A., Ph.D.

First Year.—A course of Lectures preparatory to the course in Natural Science. The Lectures are illustrated by experiments, and treat of the Elementary Constitution of matter, the laws of Chemical Combination by weight and volume, the Atomic Theory, Quantivalence, Chemical Formulæ and Equations, Chemical Attraction, characteristics of Acids, Bases and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements, and many of their compounds, etc. A few Lectures are usually devoted to the consideration of some of the more important Organic Substances, including Starch, Sugars, the Vegetable Acids and Alkaloids, Alcohol, etc. During the course attention is called as far as possible to the relations of Chemistry to various manufacturing industries.

Text-Book.—Remsen's Introduction to the study of Chemistry.

Third Year.—Additional Department. (*The Chemistry of the Metals, or Organic Chemistry*).—One Lecture a week. (*Practical Chemistry*).—Qualitative Analysis, as in Thorpe and Muir's Qualitative Chemical Analysis, two afternoons a week.

Fourth Year.—Additional Department. A course of Practical Chemistry, in continuation of that of the Third Year.

NOTE.—New chemical laboratories, capable of accommodating about forty Students, have recently been erected, and afford excellent facilities for practical work. Students in Arts taking classes in Practical Chemistry pay a special fee of ten dollars for the session.

---

13. METEOROLOGY.

Superintendent of Observatory, C. H. McLEOD, MA.E.

Instructions in Meteorological Observations will be given in the Observatory at hours to suit the convenience of the senior Students.

Certificates will be granted to those Students who pass a satisfactory examination on the construction and use of Meteorological Instruments and on the general facts of Meteorology.

---

14. PEDAGOGY.

Lectures on this subject will be given in the Normal School to undergraduates of the Third and Fourth Years who wish to obtain the Provincial Academy Diploma.

Lecture hours : 3 p.m., Tuesday and Friday.

---

15. GYMNASTICS.

R. T. MACKENZIE, B.A., Instructor.

The classes will meet at the University Gymnasium, at hours to be announced at the commencement of the Session. The Wicksteed silver and bronze medals (the gift of Dr. R. J. Wicksteed) are offered for competition to Students of the Graduating Class, and to Students who have had instruction in the Gymnasium for two sessions,—the silver medal to the former, the bronze medal to the latter. (See Regulations appended.)

II. HONOUR COURSES.

1. CLASSICS.

Third Year.—The Authors to be read in Class, and privately by the Candidates, together with the History and other subjects, are selected at the commencement of the Session, and are divided into *Part I.* and *Part II.*, at the Honour Examination.

Fourth Year.—Part I.—(1) *Greek Authors:*—Æschylus, Prometheus Vinctus; Sophocles, Antigone; Euripides, Medea; Herodotus, Bk. IX.; Xenophon, Hellenics, Bks. I. and II.; Æschines, Contra Ctesiphontem. (2) *Latin Authors:*—Horace, Epistles, Bk. I.; Juvenal, Satires VIII. and XIII.; Persius, Satires V. and VI.; Livy, Bk. XXI.; Tacitus, Annals, Bk. II.; Cicero, De Officiis. (3) *Greek and Latin Prose Composition:*—As in Arnold's Greek Prose and Smith's Principia Latina, Part V. *Part II.*—(1) *Greek:*—Plato

Republic, Books I. and II. Aristotle, The Poetics. Herodotus, Book VIII. Thucydides, Books VI. and VII. Hesiod, Works and Days. Æschylus, Seven against Thebes. Aristophanes, The Frogs. Pindar, Olympic Odes. Theocritus, Idylls I. to VI. Demosthenes, De Corona. (2) *Latin* :—Livy, Books XXII. and XXIII. Tacitus, Annals, Book I. Tacitus, Histories, Book I. Virgil, Æneid, Books I. to IV. Plautus, Aulularia. Terence, Adelphi. Juvenal, Sat. X. Cicero, De Imperio Cn. Pompeii. (3) *History of Greece and Rome* :—*Text-Books.*—1. Grote's History of Greece. 2. Arnold's History of Rome. 3. Mommsen's History of Rome. 4. Mahaffy's History of Greek Literature. 5. Cruttwell's History of Roman Literature. 6. Cruttwell and Banton's Specimens of Roman Literature. 7. Donaldson's Theatre of the Greeks. (4) *Composition* :—Composition in Greek and Latin Prose. (5) General Paper on Grammar, History and Antiquities.

---

2. MENTAL AND MORAL PHILOSOPHY.

THIRD YEAR.

Part I.—Schwegler's History of Philosophy, Chapters 1-21 inclusive; Mill's System of Logic, Books IV. and V.; James' Principles of Psychology Chapters 17-22 inclusive; Thomson's Outlines of the Laws of Thought. Any two of these subjects, along with the Honour Lectures, may be taken as the Additional Course.

Part II.—Plato's Theaetetus (by S. W. Dyde)—Fraser's Selections from Berkeley.

FOURTH YEAR.

Part I.—Schwegler's History of Philosophy, Chapters 22–45 inclusive; Lorimer's Institutes of Law; Descartes' Method and Meditations; Green's Prolegomena to Ethics; Mill's System of Logic, Book VI. Any two of these subjects, along with the Honour Lectures, may be taken as the Additional Course.

Part II.—Aristotle's Nicomachean Ethics; Zeller's Stoics, Epicureans and Sceptics; Spinoza's Ethics; Watson's Selections from Kant; Maine's Ancient Law.

N.B.—The class essays of Candidates for Honours are expected to display superior ability in the discussion of philosophical subjects.

---

3. ENGLISH LANGUAGE, LITERATURE AND HISTORY.

THIRD YEAR.

Part I.—Early English; Morris and Skeat, Part II., Extt. I-IX. inclusive Spencer—Faerie Queene, Bk. I.; Milton—Comus; Burke—Reflections on the French Revolution; Hallam—Middle Ages, chaps. 1, 3, 5. (The above-mentioned portion of the Honour work constitutes the Additional Course of the Third Year.) Sweet's Anglo-Saxon Reader; Extt. IV., VIII. and XXI.; Dryden—Annus Mirabilis; Absalom and Achitophel, Part I.; the Preface to the "Fables;" Macaulay—Essays on Clive, Ranke's History of the Popes, and Warren Hastings.

Part II.—Sweet's Anglo-Saxon Reader; the pieces in verse; Chaucer—Assembly of Foules (ed. Lounsbury); Sidney—An Apologie for Poetry (ed. Arber, to be obtained by post from the editor, 1 Montague Road, Edgbaston, Birmingham, price 6d.); Milton—Shorter English Poems; Areopagitica (ed. Hales); Addison—Essays on Paradise Lost and on the Imagination (Spectator); Wordsworth—Prelude (Moxon's edition); Leslie Stephen—English Thought in the Eighteenth Century, Vol. II., chap. X., sections V-X. inclusive; Macaulay, Vol. I., chap. I.; Green, History of the English People—(Reigns of Eliz. and Chas. II.)

FOURTH YEAR.

Part I.—Sweet's Anglo-Saxon Reader, Extt. II., XIII., XX.; Pope—Essay on Criticism, Essay on Man; Shelley—Adonais; Tennyson—In Memoriam; Buckle—History of Civ. in England, 4 chaps. (The above-mentioned portion of the Honour work constitutes the Additional Course of the Fourth Year.) Early English; Morris and Skeat, Part II., Extt. X-XX. inclusive; Shakspere—Love's Labor's Lost—A Midsummer Night's Dream—Hamlet; Matthew Arnold—Essays in Criticism (the second).

Part II.—Portions of Beowulf (ed. Harrison and Sharp); Sweet's Second Anglo-Saxon Reader; Vespasian Hymns; Sir Thomas More—Utopia (ed. Arber); Villiers—Rehearsal (ed. Arber); Campbell—Pleasures of Hope; Tennyson—Coming of Arthur, Gareth, and Lynette, Holy Grail, Passing of Arthur; Gibbon—Decline and Fall, chaps. L., LI., LXIV., LXV.; Guizot—History of Civilization in Europe; Macaulay—Vol. I., chap. 3; Freeman—Growth of the English Constitution.

---

4. MATHEMATICS AND PHYSICS.

First and Second Years.—MATHEMATICS.—Hall and Stevens' Euclid; McDowell's Exercises in Modern Geometry; Hall and Knight's Advanced Algebra; Todhunter's or Burnside and Panton's Theory of Equations (selected course); Lock's Higher Trigonometry, with McClelland and Preston's Spherical Trigonometry, Part I.; Salmon's Conic Sections, chapters 1, 2, 3, 5, 6, 7, and 10 to 13 inclusive; Williamson's Differential and Integral Calculus (selected course).

Third Year.—MATHEMATICAL PHYSICS. Part I.—1. Minchin's Statics, Vol. I, selected chapters. 2. Williamson and Tarleton's Dynamics, chaps. 1 to 8 inclusive. Part II.—Remainder of Minchin's Statics, Vol. I.; Besant's Hydro-mechanics, Part I., chaps. 1, 2, 3, 7; Godfray's Astronomy; Parkinson's Optics.

B. A. HONOUR COURSE.

Part I.—MATHEMATICAL PHYSICS.—Honour Course of the Third Year (the whole). PURE MATHEMATICS.—Williamson's Differential and Integral Calculus; Salmon's Geometry of Three Dimensions (selected course).

Part II.— Pure Mathematics.—Boole's Differential Equations (selected course). Mechanics—Minchin's Statics, Vol. II., except chapters 14 and 18. Williamson's and Tarleton's Dynamics (the whole, including the Dynamics both of Rigid Bodies and of a particle). Routh's Dynamics of a Rigid Body (for reference). Besant's Hydro-mechanics.

Physical Astronomy.—Godfray's Lunar Theory, or Cheyne's Planetary Theory; Newton's Principia, Lib. I., Sects. 1, 2, 3, 9 and 11.

Light.—Preston's Theory of Light.

Electricity and Magnetism.—Ordinary Course, with Cumming's Theory of Electricity and Maxwell's Elementary Electricity.

Heat, Acoustics } As in ordinary course.

Engineering Students may be Candidates for Honours.

The above course in each year, and the lecture hours assigned to it in the time table, are subject to alterations or omissions, which will be made definitely known to Candidates for Honours at the beginning of the session.

---

5. GEOLOGY AND NATURAL HISTORY.

THIRD YEAR.

Part I.—Mineralogy.—Crystallography. Physical properties of minerals dependent upon light, electricity, state of aggregation, etc. Chemical composition. Principles of classification. Description of species, important as constituents of rocks. (One lecture weekly during First Term, and two during Second.)

Part II.—Blowpipe Analysis and Determinative Mineralogy.—(One afternoon weekly in the Laboratory during the session.—*Text-Book*:—Brush's Determinative Mineralogy and Blowpipe.)

Instructions will be given to the class for study and collection in the vacation.

B.A. HONOUR COURSE.

Part I.—(1) *Mineralogy.*—Description of mineral species, particular attention being called to the Economic Minerals of Canada. Calculations of Mineralogical Formulæ, Quantivalent Ratios, etc. (Two lectures weekly in the First Term.)

(2) *Palæontology.*—Being an extension of that in the third year, with special studies of the more important groups of Fossils. (One lecture and one demonstration weekly in the First Term.)

Part II.—(3) *Petrography.*—Essential and accessory constituents of Rocks. Microscopic and macroscopic characters. Preparation of Rock-sections. Microscopic examination of Minerals and Rocks. Principles of classification. Description and determination of Rocks. (One lecture weekly in the Second Term, with additional practical work 4 hours weekly.)

(4) *Canadian Geology.*—Special studies of the Geology of the Dominion of Canada. (One lecture weekly in the Second Term.)

(5) *Practical and Applied Geology.*—Including methods of observing, and recording geological facts, and searching for mineral deposits—Geology as applied to the Arts. (One lecture weekly in the Second Term.)

TEXT-BOOKS.—Dana, Geikie, Dawson, Nicholson, Survey Reports, etc.

Candidates for Honours will be expected to attain such proficiency as to be able to undertake original investigations in some at least of the subjects of study.

Students in the Faculty of Applied Science may be Candidates for Honours.

ADDITIONAL DEPARTMENT.

Third Year.—Mineralogy as in Part I. above.

Fourth Year.—Palæontology and Practical Geology as in Parts I. and II. above. Or the Student may take the Lectures in Mineralogy instead of Palæontology, or those in Petrography or Canadian Geology instead of Practical Geology.

---

6. MODERN LANGUAGES.

(French and German, both of which must be taken.)

THIRD YEAR.

Part I.—FRENCH.—La Fontaine :—Les Fables. Racine :—Les Plaideurs. Paul Albert :—Littérature de XVIIe siècle. Translation into French.—Goldsmith :—The Vicar of Wakefield. Corneille :—Horace.

GERMAN.—Schiller, Wilhelm Tell. German Prose composition, Buchheim.

(Either of the above may be taken as the Additional Course in the language to which it belongs. See § III.)

The Ordinary Courses in French and German must also be taken. See § III.

Part II.—FRENCH.—Racine :—Phèdre, Les Plaideurs. Boileau :—L'Art Poétique. Pascal :—Les Pensées. Brunot :—Grammaire Historique.

GERMAN.—Wieland.—Oberon. History of German Literature; Gostwick and Harrison, Chaps. I-V., IX., XIII.

FOURTH YEAR.

Part I.—FRENCH.—Brunot :—Grammaire Historique. Paul Albert :—La Littérature Française, des origines à la fin du XVIe siècle. Emile Souvestre :—Un Philosophe sous les toits. Translation into French :—As You like it.

GERMAN.—Lessing, Nathan der Weise; Wieland: Die Abderiten. German Prose Composition, Buchheim.

(Either of the above may be taken as the Additional Course in the language to which it belongs.)

The Ordinary Courses in French and German must also be taken.

Part II.—French. Molière:—Le Misanthrope. Victor Hugo:—Hermani. La Rochefoucauld:—Les Maximes. Montaigne. Brunot:—Grammaire Historique. Etudes des anciens textes Français (Demogeot).

German.—A special study of Goethe's "Faust" (Part I.). Selections from Heine's Lyrical Poems. Paul:—Middle High German Grammar. Zarnke:—Das Niebelungen Lied. Gostwick and Harrison, Chaps. XXV., XXX.

For First and Second Rank Honours the successful Candidates must be capable of speaking and writing both languages.

---

7. SEMITIC LANGUAGES.

THIRD YEAR.

Part I.—Hebrew.—Genesis (the whole book). Isaiah, chaps. 40-66. *Aramaic.*—Daniel. *Syriac.*—The Peshito: St. John, chaps. 1-5. *Literature.*—Driver's "Uses of the Tenses in Hebrew."

Part II.—Hebrew.—Ecclesiastes (the whole Book). Psalms, Books 1 and 2 (1-72). *Aramaic.*—Targum of Onkelos, Genesis, chaps. 1-10 *Syriac.*—The Peshito,—Romans, chaps. 1-5. *Literature.*—Davidson's "The Hebrew Text of the Old Testament."

FOURTH YEAR.

Part I.—Hebrew.—Proverbs, chaps. 20 31. Job, chaps. 27-42. *Aramaic.*—Ezra. *Syriac.*—The Peshito: St. John, chaps. 6-15. *Literature.*—Muller's "Outlines of Hebrew Syntax."

Part II.—Hebrew.—Deuteronomy (the whole Book).—Malachi (id.). *Aramaic.*—Selections from the Targums of Jonathan Ben Uzziel, etc. *Syriac.*—Bar Hebræus: Selections from his Chronicles. *Literature.*—Renan's "A General History of the Semitic Languages."

Additional Department:—(For Third and Fourth Years.)—The Aramaic Language:—Brown's Aramaic Method and Translation. The Aramaic portions of Scripture, Targums of Onkelos and Jonathan Ben Uzziel. *The Syriac Language:*—Grammar, Translation from the Peshito.

LECTURES IN THE UNDERGRADUATE COURSE IN THE FACULTY OF ARTS.

SESSION OF 1891-92.

	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year.	9	Classics.	† Mathematics. (*b*)	Mathematics.	† Mathematics. (*b*)	Mathematics.
	10	Mathematics.	Classics.	Classics.	Classics.	Classics.
	11	English.	* French.	* French.	* French.	English.
	12	Elementary Chemistry.	* German. * Hebrew.	English.	* German. * Hebrew.	Elementary Chemistry.
Second Year.	9	* French.	Logic.	* French.	* Hebrew.	* French.
	10	Classics.	* Hebrew.	Logic.	Logic.	* German. † Mathematics.
	11	Mathematics.	Classics.	† Mathematics. Botany.	Classics.	Classics.
	12	† Mathematics. Botany.	* German (*c*). Math. Phy.	English (*b*).	* German (*c*).	English.
Third Year.	9	English Literature.	Classics.	† Classics. † Math. Phy.	Classics.	†Classics. † English. † Geol.
		Geology. (*b*)		† Anglo-Saxon.		German. † Math. Phys.
	10	German. † Math. Physics.	French. † Ment. Phil.	Physics (Mathematical).	French Chemistry	Rhetoric.
		† Mental Philosophy.			Hebrew.	* Syriac, etc
	11	Mental Philosophy.	Zoology.	Mental Philosophy.	Zoology.	Math. Physics.
	12		Experimental Physics.	Classics.	Experimental Physics.	
	1		Hebrew.		Hebrew.	
Fourth Year.	9	Exp. Physics. † English.	Astronomy. (*a*)	† Classics. Geology. † Math. Phy.	Exp. Physics.	† Classics. † Math. Phys.
	10	Geology.	French. † Ment. Phil.	English Literature.	† Mental Philosophy.	Geology.
					German. History.	
	11	Classics. † Geology.	Moral Phil. † Math. Phys.	Classics.	Moral Philosophy.	French. † Geology. Anglo-
			Chaldee.		Chaldee.	Saxon and Early English.
	12	Moral Phil.		† Geology.	Astronomy. (*a*)	German.
	1				* Hebrew.	

(*a*) During First Term. (*b*) Second Term. (*c*) For beginners entering 2nd Year. † For Candidates for Honours

* The Student may take at his option French or German in the first two years, or, if a Theological Student, Hebrew.

Classes at 1 p.m. may be changed to other hours.

Library open every day, 9 to 4. The Museum will be opened as arranged by the Principal.

Determinative Mineralogy, Wednesday, at 2 p.m. Practical Chemistry, Monday and Thursday, at 2 p.m., for 3d and 4th Years; First Year with the Class in Applied Science.

Special Course for Women.

IN THE FACULTY OF ARTS.

Donalda Endowment.

Professors and Lecturers (as on page 27). Lady Superintendent, Miss Helen Gairdner.

The classes for women under this endowment are wholly separate, except those for Candidates for Honours (including most of the additional courses in the Third and Fourth Years). The examinations are identical with those for men. Women will have the same privileges with reference to Classing, Honours, Prizes and Medals as men.

Regulations for Examinations, Exemptions, Boarding Houses, Attendance, Conduct, Library and Museum are the same as for men. Undergraduates wear the Academic Dress; others do not.

(Associates in Arts, who, at their special Examination, have passed in Latin, Algebra and Geometry, are not required to present themselves for the Matriculation Examination in these subjects.)

The *Jane Redpath Exhibition* is open for competition, at the beginning of the First or Second Year, to both men and women.

Another Exhibition (value $100, along with free tuition) is open for competition in the First or Second Year, to students of the Donalda Department only. For course see § II *ante*. Candidates for this Exhibition are allowed, according to the general rule of the Donalda Department, to substitute a Modern language for Greek in the examination. In this case while the course in one modern language will be as in §II *ante*, the course in the other to be substituted for Greek will be—

For First Year:—

French:—Grammar—Darey's French Grammar. Lafontaine's Fables. Molière—Le Bourgeois Gentilhomme. Sardou.—Mlle de la Seiglière.

Translation from English into French.

or *German*:—Grammar—Vandersmissen and Fraser's German Grammar. Adler's Reader:—First and Second Parts. Schiller—Der Gangnach den Eisenhammer.—Schiller—Das lied von der Gloche.

Translation from English into German.

For Second Year:—

French:—Racine, Iphigenie. Dr. C. Saucerote — l'Esprit de Montaigne. Lamartine, Jeanne d'Arc.

or *German*:—

Schiller, Der Neffe als Onkel.
Egmont, Leben und Tod.
Die Kraniche des Ibycus (Buchheim).
Grammar. Translation of French and English into German.

One free tuition may be awarded to a Candidate who approach s very near to the winner of either of the Exhibitions.

The income of the *Hannah Willard Lyman Memorial Fund* will be given in prizes.

I. MATRICULATION AND ADMISSION.

Classics.—I. *Latin.*—Caesar, Bell. Gall, Book I; and Virgil, Aeneid, Book I, lines 1-300; Latin Grammar.

Greek.—Xenophon, Anabasis, Book I.; Greek Grammar.

Candidates who cannot pass in Greek may substitute an additional modern language, subject to the same regulations throughout the course of four years.

Mathematics.—Arithmetic including a knowledge of the Metric System; Algebra to Quadratic Equatio ns (inclusive); Euclid, Elements, Books I., II., III.

English.—Writing from Dictation. A paper on English Grammar, *including Analysis*. A paper on the leading events of English History. Essay on a subject to be given at the time of the Examinations.

French.—Grammar up to the beginning of Syntax. An easy translation from French into English. Candidates unable to take French are not excluded, but will be required to study German after entrance.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners on application made through the Professor of Classics.

Partial Students.—Candidates unable to pass in all the above subjects may be admitted as Partial Students, in the separate classes; if prepared to enter in three of the subjects of the ordinary course of study, they may in the First Year make good their standing as Undergraduates at the Christmas or Sessional Examinations.

Occasional Students.—Ladies desirous of taking one or two Courses of Lectures in the separate classes f r women, as Occasional Students, will report their names and the classes they desire to attend to the Lady Superintendent, and may then procure tickets from the Secretary of the University

II. ORDINARY COURSE OF STUDY FOR THE DEGREE OF B.A.

In Separate Classes.

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics and Mathematical Physics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); with any three subjects out of the two following divisions, at the option of the Student, provided two be selected from one division, and one from the other:—

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been previously chosen. (*b*) French or German (whichever has been taken in the first two years). (*c*) English and Rhetoric. (*d*) Mental Philosophy.

II. Science.—(*e*) Optics and Descriptive Astronomy. (*f*) † Experimental Physics. (*g*) Natural Science (Zoology).

Fourth Year.—Latin or Greek, same Language as in Third Year; Mathematical Physics (as in Third Year), or Astronomy and Optics; Moral Philosophy with any three subjects out of the two following divisions, at the option of the Student, provided two be selected out of the one division, and one out of the other:—

I. Literature, etc.—(*a*) Greek or Latin, according as Latin or Greek has been taken above. (*b*) French or German, same language as in Third Year. (*c*) History.

II. Science.—(*d*) Astronomy and Optics, if not chosen as above. (*e*) † Experimental Physics. (*f*) Natural Science (Geology).

† Undergraduates claiming exemptions (see § V.) cannot take Astronomy and Optics or Experimental Physics if they have not taken the Third Year Mathematical Physics.

Instead of two distinct subjects in one of the above divisions, the Student in either Third or Fourth Year may select one subject only, together with an additional course in the same, or any other of these subjects under the above rules (if arrangements be made by the Faculty for it), provided she has been placed in the first class in the corresponding subject at the preceding Sessional Examination (viz, Intermediate or Third Year, according to standing).

The additional course is intended to be more than an equivalent, in the amount of work involved, for any of the other subjects in the division.

Additional courses are provided at present in Botany and Practical Chemistry.

Gymnastics.—A class will be conducted by Miss Barnjum, which will be optional, and open to Occasional Students.

Elocution.—Should Students offer, a class for Reading and Elocution will be opened, if possible.

HONOUR COURSES AND ADDITIONAL COURSES.

(*In Mixed Classes.*)

Undergraduates desirous to take one of the Honour Courses in Classics Mathematics, Mathematical Physics, Mental and Moral Philosophy, English Language and Literature, History, Geology and other Natural Sciences, Modern Languages, or such portions of the Honour Courses as constitute the "Additional Courses," may in the Third and Fourth Years obtain exemptions to the same extent as those given to men, but must take the same lectures with men.

Details will be found in Section XII. of the Calendar.

III. DEGREES.

Students are admissible to the degrees of B.A., M.A., and LL.D., conferred in the usual way, on the usual conditions; and will be entitled to all the privileges of these degrees, except that of being elected as Fellows.

IV. FEES.

See Section XI., *ante*.

The Fees are to be paid to the Registrar of the University, from whom Tickets for the Library and copies of the Library Rules may be obtained.

Exemptions from fees may be allowed to the highest pupil of the Girls' High School of Montreal, and of other Schools, on the same terms as to men.

One exemption from tuition fees is annually allowed to the pupil (boy or girl) of the Montreal High School holding an exemption from the Schools of the Protestant Commissioners, Montreal, who has taken the highest marks at the A. A. Examinations and is recommended by the Commissioners.

V. LODGINGS, &c.

Women not resident in Montreal, proposing to attend the classes, and desiring to have information as to suitable lodgings, are requested to intimate their wishes in this respect to the Registrar of the University, at least two weeks before the opening of the session.

Students desiring information as to the above or other matters are referred to the Lady Superintendent, who will be found in her office in the rooms of the Donalda Department, every day during the session, except Saturday.

LECTURES OPEN TO OCCASIONAL STUDENTS, SESSION 1891-92.

CHEMISTRY :—*Dr. Harrington.* Tuesday and Thursday at 12.

BOTANY :—*Prof. Penhallow.* Monday at 3, Wednesday at 12.

ZOOLOGY :—*Sir Wm. Dawson.* Tuesday and Thursday at 12.

GEOLOGY :—*Sir Wm. Dawson and Mr. Adams.* Monday and Friday at 12 Wednesday at 10 a.m.

EXPERIMENTAL PHYSICS :—*Professor Cox.* Tuesday and Thursday, at 10 a.m. and 11 a.m.

PSYCHOLOGY AND LOGIC :—*Rev. Dr. Murray and Mr. Lafleur.* Tuesday and Friday at 4 p.m., and Thursday at 12.

MENTAL PHILOSOPHY :—*Rev. Dr. Murray and Mr. Lafleur.* Monday and Wednesday at 4 p.m.

MORAL PHILOSOPHY :—*Rev. Dr. Murray.* Tuesday and Wednesday at 12, and Friday at 11 a.m.

RHETORIC :—*Mr. Lafleur.* Tuesday at 11 a.m.

ENGLISH :—*Prof. Moyse and Mr. Lafleur.* Language and Literature, Tuesday, Wednesday and Friday at 4 p.m. Poets of the 19th Century, Wednesday, 3 p.m. Shakespeare, every alternate Friday at 3 p.m. Chaucer—Monday at 10 a.m.

HISTORY :—*Prof. Moyse.* Thursday at 9 a m.

LATIN AND GREEK* :—*Rev. Dr. Cornish and Dr. Eaton.*

FRENCH* :—*Dr. Darey.*

GERMAN* :—*Mr. Toews.*

MATHEMATICS AND MATHEMATICAL PHYSICS* :—*Dr. Johnson and Prof. Chandler.*

Those Courses in which two lectures weekly are delivered will each amount to about 45 lectures, and the others in proportion.

---

* The Lectures on these subjects extend over all the Years of the Course, and the hours will depend on the standing of Students with respect to previous preparation as ascertained by examination.

APPENDIX.

Lectures for Candidates for the degree of M.A. in course.

It is hoped that arrangements will be made next session for courses of Lectures accessible to Bachelors of Arts desirous of preparing for the examinations for the degree of M.A.

Information as to details may be obtained on application to the Dean of the Faculty.

FACULTY OF ARTS.

*ORDINARY LECTURES IN THE DONALDA SPECIAL COURSE FOR WOMEN.

YEARS	HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FIRST YEAR.	9	† Mathematics (*b*)				
	11			† Mathematics (*b*)		
	12		Chemistry.		Chemistry.	Greek.
	2	Mathematics	French.	Mathematics.	French.	Mathematics.
	3	Latin.	German.	Latin.	Latin.	German.
	4	Greek.	English.	English.		English.
SECOND YEAR.	10	Mathematics.	Math. Phy.			
	11	Greek.	† Mathematics.	Latin.	† Mathematics.	
	12		Latin.	Botany.	Logic.	
	2					
	3	Botany.	French.	English.	French.	English.
	4	German.	Logic.	Greek.	German.	Logic.
THIRD YEAR.	10	English.	Classics.		Classics.	French.
	11	French.	Rhetoric Exp. Physics.		Exp. Physics.	
	12	Classics.	Zoology.	Math. Physics.	Zoology.	Math. Physics
	3	German.			German.	
	4	Metaphysics.		Metaphysics.		
FOURTH YEAR.	9	Astronomy (*a*)			History.	
	10	French.	Exp. Physics.	Geology.	Exp. Physics.	French.
	11	German.	Classics.	Astronomy (*a*).	Classics.	Moral Phil.
	12	Geology.	Moral Phil.	Moral Phil.		Geology.
	2					German.

The hours for Practical Chemistry and Additional Botany will be arranged at the beginning of the Session.

† For Candidates for Honours.

* For Honour Lectures in 3rd and 4th years see previous table.

(*a*) During First Term.

(*b*) During Second Term.

TAYLOR & GORDON, Architects.

THE W. C. McDONALD ENGINEERING BUILDING.

Faculty of Applied Science.

THE PRINCIPAL *(ex-officio)*.

Professors :—HARRINGTON. Associate Professors :—DAWSON.
BOVEY. DAREY.
McLEOD. MOYSE.
CHANDLER. PENHALLOW.
CARUS-WILSON. COX.

Associate Lecturers :—LAFLEUR, TOEWS, ADAMS.

Assistant :—TAYLOR.

Dean of the Faculty :—HENRY T. BOVEY, M.A., M.INST.C.E.

§ I. GENERAL STATEMENT.

The Instruction in this Faculty is designed to afford a complete preliminary training, of a practical as well as theoretical nature, to such Students as are preparing to enter any of the various branches of the professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Five distinct Departments of study are established, viz. :—

(1).—Civil Engineering and Surveying. (2).—Electrical Engineering. (3).—Mechanical Engineering. (4).—Mining Engineering. (5).—Practical Chemistry.

Each of these extends over four years, and is specially adapted to the prospective pursuits of the Student.

The Degrees conferred by the University upon such undergraduates of this Faculty as shall fulfil the conditions and pass the Examinations hereinafter stated will be, in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular Department of study pursued ; and, subsequently, the degrees of "Master of Engineering" or of "Master of Applied Science." (§ III.)

CIVIL ENGINEERING AND SURVEYING.

This course is designed to supply a thorough training in the principles upon which is based the sound practice of a civil engineer.

The course comprises lectures and systematic work in the Drawing Room (§ IX). Field (§ IX), Workshops (§ X) and Laboratories (§ X).

In the lecture-room, the accuracy and extent of the Student's knowledge are frequently tested by means of questions such as the engineer is likely to meet with in the exercise of his profession.

ELECTRICAL ENGINEERING.

This course is based on a thorough training in mathematics and experimental physics gained during the first three years. In the fourth year the Student will enter the Electrical Engineering Laboratory, where the practical application of physical laws and methods is illustrated in the working of the apparatus with which the Laboratory is equipped.

MECHANICAL ENGINEERING.

The Lectures and class work are devoted to a study of the principles of Kinematics and Dynamics of Machinery, and of Thermodynamics. Work is done in the Mechanical and Thermodynamic Laboratories, where the practical application of the theories discussed in the lecture room is illustrated.

The Student will also go through a course of Mechanical Drawing and of Workshop practice.

MINING ENGINEERING.

The object of this Department is to give Students a knowledge of the characters and modes of occurrence of various economic minerals, together with the methods employed for their analysis, extraction and subsequent treatment. The work includes such portions of the Civil and Mechanical Engineering courses as are essential to the education of a mining engineer.

PRACTICAL CHEMISTRY.

The work in this Department is intended to prepare Students to act as analytical chemists and assayers, or as teachers of Chemistry. The training which it affords would also be of the greatest benefit to young men entering various departments of commercial life or intending to take part in manufacturing industries.

---

§ II. MATRICULATION AND ADMISSION.

JUNIOR MATRICULATION.—For entrance into the First Year, two examinations are held :—

(1) In the first week in June, when Schools may send their pupils for examination to McGill College.

N. B.—Schools at a distance may send to the Secretary of the University the names of Deputy Examiners, together with a list of candidates, on or before May 15th, and, if approved, the examination papers will be forwarded to them.

(2) At the opening of the session, on September 15th and following days, in McGill College alone.

The subjects of examination are :—

Mathematics.*—Arithmetic, including a knowledge of the Metric System Algebra, to the end of Simple Equations ; Euclid's Elements, Books I., II., III.

English.—Dictation, Grammar (including Analysis) and Composition.

French.—Grammar to Syntax (exclusive) and easy translation.

Candidates unable to take the French examination are allowed to enter, but must take German as the modern language of their undergraduate course.

Candidates who have passed the Associate in Arts examinations in the above subjects will be received as Matriculated Students in the First Year.

---

*After September, 1891, the subject of Mathematics will include Algebra to the end of Quadratic Equations, and Trigonometry (as in Hamblin Smith's Trigonometry, pages 1 to 100, omitting Chap. XI).

*JUNIOR MATRICULATION.—For entrance into the Second Year, only one examination is held, viz., on September 15th and following days, in McGill College. The subjects of examination are:—

Arithmetic.

Algebra.—To the end of Quadratics (as in Colenso's Algebra, Part I).

Euclid.—Books, I, II, III, IV, VI, and XI, and the definitions of Book V.

Plane Trigonometry.—Including solution of Triangles, and the use of Mathematical Tables.

Chemistry.—As in Remsen's Introduction to the Study of Chemistry.

English.—Dictation, Grammar (including Analysis), Composition, and the leading facts of the History of England.

French or German.—Grammar and easy translation.

Candidates unable to pass in Chemistry may be allowed by the Faculty to enter and take the First Year lectures on Chemistry.

Candidates who produce certificates of having already completed a portion of a course in some recognized School of Applied Science may be admitted to an equivalent standing.

PARTIAL STUDENTS.—Students may be allowed to take one or more courses of instruction upon showing by examination or otherwise that they are qualified to do so.

---

§ III. EXAMINATIONS.

I. FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

1. FACULTY EXAMINATIONS.

There will be a Christmas Examination for Students of the First Year in all the subjects, and for Students of the Second, Third and Fourth Years in Mathematics, and in those subjects which they take in the Faculty of Arts. A Sessional Examination in all the subjects will be held at the end of the First and Second Years.

---

*There will be no matriculation examination for entrance into the Second year after September, 1891.

2. UNIVERSITY EXAMINATIONS.

(*a*) There will be a Primary Examination at the end of the Third Year in all subjects of that year. Candidates must pass this Examination before entering the Final Year.

(*b*) There will be a Final Examination for the degree of Bachelor of Applied Science at the end of the Fourth Year, in all the subjects of that year.

Successful Students will be arranged in order of merit.

NOTE.—Students who take their Degree in one of the Courses provided by the Faculty of Applied Science may graduate in any of the remaining Courses, by attending one or more subsequent sessions.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors of Applied Science of at least three years* standing, and must produce satisfactory certificates of having been engaged during that time upon *bonâ fide* work in either the Civil, Electrical, Mechanical, or Mining Branch of Engineering.

They must pass with credit an examination extending over the general theory and practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have been engaged during the three preceding years.

Candidates must present applications for Examinations, together with the necessary certificates and fees. The Faculty will notify the candidates whether their certificates are satisfactory, and also of the date of the Examination.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years* standing, must present certificates of having been employed during that time in some branch of scientific work, and must pass with credit an examination on the Theory and Practice of those branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

* Students taking a post graduation course will be allowed to pass the examination for the Master's Degree at the end of the first year, and the Degree will be conferred at the end of the third year, provided the remaining conditions, specified above, have been fulfilled.

§ IV. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

§ V. LIBRARY AND MUSEUM.

Students in this Faculty have the same privileges with reference to the Library and Museum as Undergraduates in Arts.

§ VI. FEES.

The fees for all Students, excepting such as entered previous to September, 1890, will be $100.00 per annum, this amount to include matriculation, tuition, gymnasium, library and graduation fees, and also the use of the machinery and other apparatus, as well as the cost of material in the workshops and engineering laboratories. The present Third and Fourth year Students may obtain similar privileges on payment of a special fee of $10.

Every Student will be required to deposit with the Secretary of the University the sum of $5.00, as caution money for damage done to the machinery or other apparatus.

Partial Students may be admitted to the Professional Classes in any year by payment of the ordinary fees for that year; or they may attend the lectures on any subject by payment of a special fee.

Special Workshop Fees.—Partial Students desirous of taking the workshop courses will be required to pay of the following fees, which include cost of materials and use of all tools:

1 day, or 7 hours per week for the whole Session from September to April:					$25 00
2 days, or 14	"	"	"	"	45 00
3 days, or 21	"	"	"	"	60 00
4 days, or 28	"	"	"	"	70 00

The fees must be paid to the Secretary, and the tickets shown to the Dean, within a fortnight after the commencement of attendance in each Session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty, on payment of a fine of $1.

Students are required to purchase their own chemicals, etc., except in the First Year. The larger pieces of chemical apparatus will be supplied by the Laboratory, the Students being responsible for breakage.

Graduates in the Faculty of Applied Science may take further courses on payment of half the ordinary tuition fees.

Fee for the Degree of MASTER OF ENGINEERING or MASTER OF APPLIED SCIENCE, $10.00.

If for any special reason the Degree of Ma.E., or M.A.Sc., be granted in absentiâ, the fee will be $25.00.

NOTE.—For Students of the Third and Fourth years, who entered previous to September, 1890, the fees will be $49.00 for each session in the courses of Civil and Mechanical Engineering, and $59.00 for each session in the courses of Mining Engineering and Practical Chemistry.

The graduation fee for such Students will be $12.50.

---

§ VII. MEDALS, EXHIBITIONS, PRIZES, AND HONOURS.

1. The BRITISH ASSOCIATION GOLD MEDAL AND EXHIBITION, founded by the British Association for the Advancement of Science, in commemoration of the meeting held in Montreal in the year 1884.

The British Association Gold Medal for the Session 1891-92 will be awarded to the Student in the Fourth Year who takes the highest standing in the Mining Engineering Course.

2. THE STANLEY SILVER MEDAL (the gift of His Excellency The Right Honourable Lord Stanley).

The Stanley Medal for the Session 1891-92 will be awarded to the Student in the Fourth year who takes the highest standing in the Mechanical Engineering Course.

The following Exhibitions and Prizes will be open for competition at the beginning of the session, Students being required to notify the Dean of their intention to compete, at least one week before the commencement of the examinations.

3. A British Association Exhibition of $50.00 to Students entering the Fourth Year, the subjects of examination being the Theory of Structures, Mathematics and Mathematical Physics of the Ordinary Course.

4. A SCOTT EXHIBITION of $60.00, founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott, to Students entering the Third Year, the subjects of Examination being :—

[*a*] Macaulay's History of England, Vol. I, cap. I ; Scott's Lady of the Lake. [*b*] Mathematics. [*c*] Mechanism.

5. A British Association Prize of $25 will be open for competition to Students entering the Second Year, the subjects of Examination being :—

(*a*) Macaulay's History of England, Vol. I, cap. I ; Shakespeare's Tempest. (*b*) Mathematics.

6. TWO PRIZES IN BOOKS, each of the value of $25, one presented by E. B. Greenshields, B.A., and one presented by W. E. Gower, for the two best Summer Reports or essays.

7. Two Prizes, each of $10, from the British Association Medal Fund, to Students entering the Third Year, for proficiency in Levelling or Transit Work.

8. A Prize of $20.00, from the British Association Medal Fund, to Students entering the Second Year, the subjects of examination being :—(*a*).—Inorganic Chemistry ; (*b*).—Elements of Organic Chemistry ; (*c*).—Practical Chemistry.

9. An Exhibition on the Thomas Workman endowment, being an exemption from fees, of the value of $88, to be offered for competition in the September Matriculation Examination of the First Year, to candidates intending to follow the Mechanical Engineering course. Application as to conditions must be made to the Dean on or before September 1st.

10. A Prize of $15.00, presented by A. T. Taylor, F.R.I.B.A., to be offered for competition in September, 1891, to Students matriculating into the First Year, for proficiency in Freehand and Model Drawing.

11. Prizes or certificates of merit are given to such Students as take the highest place in the Sessional and Degree Examinations.

12. HONOURS.—On graduation, Honours will be awarded for advanced work in Professional subjects.

13. Science Scholarships granted by Her Majesty's Commission for the Exhibition of 1851.—These Scholarships of £150 sterling a year in value are tenable for two, or, in rare instances, three years. They are limited, according to the Report of the Commission "to those branches of Science (such as Physics, Mechanics and Chemistry), the extension of which is specially important for our national industries." Their object is, not to facilitate ordinary collegiate studies, but "to enable Students to continue the prosecution of science with the view of aiding in its advance, or in its application to the industries of the country."

A nomination to one of these scholarships for the year 1891 has been placed by the Commission at the disposal of McGill University, and another may be granted in 1893.

It is open to Students of not less than three years standing in the Faculties of Arts or Applied Science, and is tenable at any University or at any other Institution approved by the Commission.

---

§ VIII. SPECIAL PROVISIONS.

1. Partial Students may be admitted to the professional classes upon payment of special fees (§ VI).

2. Students in Applied Science may, by permission of the Faculty, take the Honour Classes in the Faculty of Arts.

3. Students and Graduates in Arts will be admitted to such standing in the Faculty of Applied Science as their previous studies will warrant, but are recommended to take the drawing and shop-work during their Arts Course.

4. Undergraduates in Arts of the Second and Third Years, or Graduates of any University, entering the Faculty of Applied Science, may, at the discretion of the Professors, be exempted from such lectures in that Faculty as they have previously attended as Students in Arts, but must pass all the examinations.

5. Students who have failed in a subject in the Christmas or Sessional Examinations, and who desire to regain their standing, are required to make a written application to the Dean of the Faculty for a supplemental examination. Unless such supplemental exam-

ination is passed, Students will not be allowed to proceed to any subsequent examination in that subject.

6. Students of the Second, Third and Fourth Years may be required to answer satisfactorily a weekly paper on such subjects of the course as shall be determined by the Faculty.

7. Students who fail to obtain their Session, and who, in consequence, repeat the Year, will not be exempted from examination in any of those subjects in which they may have previously passed, except by the express permission of the Faculty. Application for such exemption must be made at the commencement of the Session.

8. A Student may obtain a certificate of standing on payment of a fee of $2.00.

9. Certificates may be given to Students who have passed through any of the special courses attached to the curriculum.

10. The headquarters of the Canadian Society of Civil Engineers is at present located in Montreal. The Society holds fortnightly meetings, at which papers upon practical current engineering subjects are read and discussed. Undergraduates joining the Society as Students may take part in these meetings, and acquire knowledge of the utmost importance in relation to the practical part of the profession.

---

§ IX. COURSES OF LECTURES.

CIVIL ENGINEERING AND APPLIED MECHANICS.

Professor:—HENRY T. BOVEY, M.A., M.INST.C.E., F.R.S.C. (William Scott Professor of Civil Engineering and Applied Mechanics).

Theory of Structures. (For Laboratory Work, see § X).

The lectures on this subject embrace:—

(*a*) The analytical and graphical determination of the stresses in the several members of framed structures, both simple and complex, as, e.g., cranes, roof and bridge trusses, piers, etc.

(*b*) The methods of ascertaining and representing the shearing forces and bending moments to which the members of a structure are subjected.

(*c*) A study of the strength, stiffness and resistance of materials, including a statement of the principles relating to work, inertia, energy and entropy, together with a discussion of the nature and effect of the different kinds of stress, and the resistance offered by a material to deformation and to blows.

(*d*) The design and proper proportioning of beams, pillars, shafts, roofs and bridge trusses, arches, earth works and retaining walls.

Hydraulics. (For Laboratory Work, see § X).

The lectures deal with this subject both theoretically and with reference to its practical applications.

The Student is instructed in the fundamental laws governing the equilibrium of fluids, and in the laws of flow through orifices, mouthpieces, submerged (partially or wholly) openings, over weirs, through pipes in open channels and rivers. The impulsive action of a free jet of water upon vanes, both straight and curved, is carefully discussed, and is followed by an investigation of the power and efficiency of the several hydraulic motors, as e.g., Reaction Wheels, Pressure-engines, Vertical Water Wheels, Turbines, Pumps, etc.

SURVEYING AND GEODESY.

Professor :—C. H. McLeod, M.A.E.

This course is designed to qualify the student for admission to the practice of Provincial and Dominion Land Surveying. It also affords a practical and theoretical training in Field Engineering, Practical Astronomy, and in the simpler operations of Geodetic Engineering. The instruction is given by lectures ; and by practice in the field, drawing-room, laboratory and observatory. The course of lectures is as follows :

Second Year.—Chain and angular surveying. The construction, adjustment and use of the various instruments. Contour surveying. Underground surveying. Topography. Ranging curves. Levelling and setting out work.

Third Year.—Railway locations. Geodesic levelling. Indirect and Barometric levelling. Hydrographic surveying. Introduction to Practical Astronomy.

Fourth Year.—Geodesy. Practical Astronomy.

Each Student in this course is required to take part in the following :

1. A chain survey 2. A contour survey based on 1. 3. Compass surveys with and without local attraction. 4. A plane-table survey. 5. The preliminary surveys and location of a line of road, the work being afterwards set out for construction. 6. The hydrographic survey of a channel in the St. Lawrence River. 7. A triangulation survey from one base, checking on a second base. 8. The precise measurement of two base lines. 9. Differences of level by spirit

level, triangulation and barometer. 10. Determinations of latitude and the meridian. 11. Determinations of time by a portable astronomical transit, by sextant, and by the solar attachment. 12. Exercises on the comparison of clocks and chronometers. 13. Practice in the use of field magnetic instruments.

Students engaged in these surveys are expected to keep complete notes, and from them to prepare all plans and sections required. The necessary instruction in topography and mapping is given in the drawing room.

The large drawing rooms are fitted up with suitable mountings for the various instruments, in order to permit of their use and investigation during the winter months. The equipment of surveying and geodetic instruments includes:—

Six transits and transit-theodolites. Seven levels. Four sextants. Two plane tables. Three surveyor's and three prismatic compasses. Three current meters. A 300 foot steel tape arranged for basework. An Altazimuth. A Precision Level. A Zenith Telescope. Astronomical Transits. Break-circuit Chronometer. Chronographs. Heliotropes. Hand levels, chains, rods, tapes, barometers, pedometers, and other minor instruments.

The instruction in the Observatory and Geodetic Laboratory (see § X) will be given in the Fourth Year.

Examinations for Land Surveyors:—Any graduate in the Faculty of Applied Science, in the Department of Civil Engineering and Land Surveying, may have his term of apprenticeship shortened to one year for the profession of Land Surveyor in Quebec or Ontario, or for the profession of Dominion Land Surveyor. He must, however, pass the preliminary and final examinations before one of the Boards of Examiners. The former examination should be passed before entering the University, or in the First or Second Year of attendance.

Special provisions will be made for Students who desire to pass the Examination for Dominion Topographical Surveyor.

DESCRIPTIVE GEOMETRY.

Lecturer:—C. H. McLeod, Ma.E.

First Year.—Geometrical drawing, orthographic projections, including penetrations, developments, sections, etc. Isometric projection.

Second Year.—Problems on the straight line and plane. Projections of plane and solid figures. Curved surfaces and tangent planes. Intersections of curved surfaces. Axometric projections. Shades and shadows. Mathematical perspective and the perspective of shades and shadows.

Third Year.—Graphical determination of spherical triangles. Spherical projections. Construction of maps.

FREEHAND AND MODEL DRAWING.

Instructor :—ANDREW T. TAYLOR, F.R.I.B.A., R.C.A.

This course is designed to give Students facility in observation and in sketching objects both from the flat and from the round. Special instruction is given in sketching parts of machinery, structural work, etc.

ELECTRICAL ENGINEERING.

Professor :—C. A. CARUS-WILSON, M.A., A.Inst. C.E., A.Inst. E.E.
(W. C. McDonald Professor of Electrical Engineering).

The theory, construction and calibration of instruments. Ammeters. Voltmeters. Galvanometers. Ampere balances. Electrostatic voltmeters. Watt meters. Alternate current voltmeters. Instruments for measuring self and mutual induction.

Magnetism. Strength of fields. Coefficients of self and mutual induction. Laws of Electro-magnetism and of Induction. Effects of stress and temperature. The construction and design of electro-magnets for special objects. Theory and use of the electro-magnet in the Dynamo.

Electrical mechanism. Regulators. Meters. Arc lamp mechanisms. Motor attachments.

Dynamos. Series, shunt and compound wound. Alternate current dynamos. Characteristics. General design and construction. Methods of winding. Different forms of armatures. Efficiency. Tests of dynamos and motors. Measurement of mechanical power absorbed.

The distribution of electricity. Lighting systems, arc and incandescent. Accumulators. Transformers. Electric traction.

MECHANICAL ENGINEERING.

Professor :—(*To be appointed during the present summer*). (Thomas Workman Professor of Mechanical Engineering).

Kinematics of Machinery.

Definition of a machine. Pairs. Kinematic chains. Triangles of velocity. Slider crank chain, and its derivatives. Direct acting engine. Oscillating engine. Quick return motions. Curves of piston position and velocity. Error due to obliquity. Angular velocities. Curves of velocity in slider crank chain. Lever crank chain and its derivatives. Drag Links. Antiparallel mechanism. Loci of points on moving links. Parallel motion. Peaucellier's link work. Double slider crank chain and its derivatives. Swinging cross block. Oldham's coupling. Elliptic chuck. Expansion of elements. Eccentrics. Instantaneous centre. Centrodes. Tension and Pressure Elements. Pulleys. Wheel and Axle. Differential Pulley. Belts. Rolling contact. Toothed gearing.

Dynamics of Machinery.

Definition of Work. Resistance—oblique—variable. Energy. Power. Reversibility. Principle of work. Conservation of energy. Kinetic energy of moving parts of a machine.

Dynamics of the Steam Engine. Polar and linear curves of crank effort, for single and double cranks with uniform steam pressure. Equations to such curves for infinite and finite connecting rods. Mean crank effort. Fluctuation of energy. Fluctuation of speed. Flywheels. Correction of curves of crank effort for varying steam pressure. Inertia of reciprocating parts. Acceleration of piston. Effect of short connecting rod. Balancing of double-acting engines; pairs of single acting engines; locomotives; high speed engines. Cushioning by steam and air. Curves of stress in piston rod. Shocks. Reversals of stress.

Friction of sliding pairs, bearing and pivots. Efficiency of a Mechanism. Governors. Dynamometers.

MINING AND METALLURGY.

Lecturer :—(*To be appointed during the present summer*).

The lectures on Mining are given during the Third Year, and among the subjects taken up the following may be mentioned :—Blasting and the nature and use of different Explosives, Quarrying, Hydraulic Mining, Boring; the Sinking, Timbering and Tubbing of Shafts; Driving and Timbering of Levels, Underground Conveyance and Hoisting, Drainage and Pumping, Lighting and Ventilation of Mines, special methods of Exploitation employed in the working of Metalliferous Deposits or of Coal Seams, etc.

Ore-dressing and Underground Surveying will also receive special attention. As yet there is no special mining laboratory in which practical operations in ore-dressing, etc., can be carried on, but it is hoped that this deficiency will be supplied in the near future.

In the Fourth Year a course of lectures on Metallurgy is given. The general properties of the metals and the nature of fuels, fire-clays, etc., are first discussed; and afterwards the more important metals and the methods of obtaining them from their ores by wet or dry process taken up in detail.

Students of the Fourth Year also devote considerable attention to the designing of mining machinery, furnaces, etc.

PRACTICAL CHEMISTRY AND ASSAYING.

Professor :—B. J. Harrington, B.A., Ph.D. (Greenshields Professor of Chemistry and Mineralogy).

Assistant :—

This course includes lectures and laboratory work. In the First Year Students of all the Departments attend a course of lectures on the Laws of Chemical Com-

bination, Chemical Formulæ and Equations, the preparation and properties of the more important Elements and their Compounds, etc. They also devote one afternoon a week during the first term and two afternoons a week during the second term to practical work in the Laboratory, where they learn the construction and use of ordinary apparatus, perform a series of experiments designed to cultivate the powers of observation and deduction, and begin Qualitative Analysis.

In the Second and Third Years Students in the Chemistry Course attend lectures on the Chemistry of the Metals or on Organic Chemistry, and receive practical instruction in Qualitative and Quantitative Analysis, including gravimetric and volumetric methods and the application of electrolytic methods to the estimation of copper, nickel, etc. Blowpipe Analysis and Determinative Mineralogy also constitute part of the work of the Third Year.

In the Fourth Year special attention is devoted to such subjects as Mineral Analysis and Assaying, and the Analysis of Iron and Steel; but considerable latitude is allowed to Students in the choice of subjects, and organic work may, if desired, be taken up.

Students of the Mining Course take Qualitative and Quantitative Analysis during the Second and Third Years, and devote considerable attention in the Fourth Year to Mineral Analysis and Assaying of various ores, fuels, etc. They also attend the class in Blowpipe Analysis and Determinative Mineralogy in the Third Year.

The chemical laboratories (see § X) are open daily (Saturdays excepted), from 9 a.m. to 5 p.m.

THERMODYNAMICS.

Lecturer:—C. A. Carus-Wilson, M.A.

Measurement of temperature. Calorimetry. Mechanical equivalent of Heat. Joule's experiments. Absolute temperature. Isothermal and adiabatic expansion. Carnot's Engine. Reversibility. Efficiency. Hot air engines. Theoretical and actual efficiency of steam engines and gas engines.

Latent heat—of water—of steam. Relation between temperature and pressure of steam. Regnault's experiments. Total heat of evaporation. Surface and jet condensers. Behaviour of steam in a cylinder. Ratio of expansion. Condensation. Action of steam jackets. Superheating. Construction of balance sheets of heat supplied to and rejected from a cylinder. Efficiency. Compound, triple, and quadruple expansion. Calculation of work done. Indicator diagrams. Boilers. Theory of explosions.

Design of engines. Calculation of dimensions of cylinders and valves. Zeuner's diagrams of valve motion. Expansion and other valves.

GEOLOGY AND MINERALOGY.

Professor:—Sir William Dawson, LL.D., F.R.S. (Logan Professor of Geology).

Professor:—B. J. Harrington, B.A., Ph.D., F.G.S.
Lecturer.—Frank D. Adams, M.A.Sc.

Second Year.—A preliminary Course in Zoology, with special reference to Fossil Animals.

Third Year.—Mineralogy (Ordinary and Honour), Petrography, Physical and Chronological Geology and Palæontology, Geology of Canada, Methods of Geological Exploration.

Fourth Year.—Special Studies in Mineralogy and Petrography; Advanced Course in General Geology and Palæontology; Geology of Canada; Practical Geology and Field-work.

For further details see Announcement of the Faculty of Arts.

Note.—Students of the Mining and Chemistry courses take the Honour Mineralogy of the Third Year. Mining Students take the whole (Honour) course of the Fourth Year. Chemistry Students take, in addition to the ordinary course in Geology, only the Honour Mineralogy of the Fourth Year.

BOTANY.

Professor:—D. P. Penhallow, B.Sc.

Course.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology.

EXPERIMENTAL PHYSICS.

Professor:—John Cox, M.A. (W. C. McDonald Professor of Experimental Physics.)

The instruction includes a fully illustrated course of Experimental Lectures on the general principles of Physics (embracing, in the Second Year.—*The Laws of Energy—Heat and Light;* in the Third Year—*Sound—Electricity and Magnetism*), accompanied by courses of practical work in the Laboratory in which the Students will perform for themselves experiments, chiefly quantitative, illustrating the subjects treated in the lectures. Opportunity will be given to acquire experience with all the principal instruments used in exact physical and practical measurements. Students of Electrical Engineering will be expected to continue their work in the Laboratory in the Fourth Year, when they will be prepared to undertake, under the guidance of the Professors, advanced measurements and special investigations bearing on their Technical Studies.

The Physical Laboratory, the munificent gift of Mr. W. C. McDonald, is now in course of erection from plans specially prepared after inspection of the principal Laboratories in England and the United States, and will be one of the most perfect buildings of its kind. It contains five storeys, each of 8,000 square feet area, and will be supplied with all the usual standard instruments as well as the apparatus required for lectures and the practical work of the Students. In planning its arrangement and equipment the special needs of original research, as well as the requirements of teaching, have been carefully considered.

MATHEMATICS AND MATHEMATICAL PHYSICS.

Professor :—G. H. CHANDLER, M.A.

The work in this department is conducted from the outset with special reference to the needs of Students of Applied Science. A large amount of time is given to practice in the use of Mathematical Tables, particular attention being paid to the solution of triangles, the tracing of curves, graphical representation of functions, reduction of observations, etc. Areas, volumes, masses, centres of gravity, moments of inertia, etc., are determined both by calculation and by observation or experiment, and each method is made to supplement or illustrate the other. In this connection use will be made, in actual laboratory practice, of a large amount of apparatus, such as Attwood's Machine, inclined planes, chronographs, rotation apparatus of various kinds, etc. The different methods of approximation, the reduction of results of experiments and observations by least squares, etc., will also receive due attention.

All Engineering Students will receive instruction in the following subjects :—

FIRST YEAR.—Euclid, six books, with exercises on Loci, Transversals, etc. Algebra, including the Binomial Theorem. Elements of Solid Geometry and of Geometrical Conic Sections. Plane and Spherical Trigonometry. Elementary Mechanics.

SECOND YEAR.—Analytic Geometry. Differential and Integral Calculus. Mechanics of Solids and Fluids.

THIRD AND FOURTH YEARS.—Continuation of Analytical Geometry, Calculus and Mechanics.

Classes will also be held for advanced (optional) work in these subjects and also in Practical and Spherical Astronomy.

Students in the Course of Practical Chemistry do not take the Analytic Geometry and Calculus.

Text Books (Partial list) : Todhunter's Euclid, Colenso's Algebra (Part 1), Hamblin Smith's Trigonometry, Wilson's Solid Geometry and Conic Sections, Wentworth's Analytic Geometry, Blaikie's Dynamics, Wright's Mechanics, Chauvenet's Practical and Spherical Astronomy.

ENGLISH LANGUAGE AND LITERATURE.

Professor:—C. E. Moyse, B.A. (Molson Professor of English Language and Literature.)

Lecturer:—Paul T. Lafleur, M.A.

First Year.—English Language and Literature.
Second Year.—A special course on English Composition.
Third Year.—A special course on English Composition.

FRENCH OR GERMAN.

French.—Professor.—P. J. Darey, LL.D., B.C.L.
German.—Lecturer.—P. Toews, M.A.

Students of this Faculty are required to take the course in one of these languages provided by the Faculty of Arts.

METEOROLOGY.

Instruction in Meteorological Observations will be given in the Observatory at hours to suit the convenience of Senior Students.

Certificates will be granted to those Students who pass a satisfactory examination on the construction and use of Meteorological Instruments, and on the general facts of Meteorology.

---

§ X. LABORATORIES, MUSEUMS, WORK-SHOPS, DRAWING-ROOMS AND OBSERVATORY.

LABORATORIES.

In the Laboratories the Student will be instructed in the art of conducting experiments, a sound knowledge of which is daily becoming of increasing importance in professional work.

Testing Laboratories.—The principal experiments carried out in these will relate to the elasticity and strength of materials, friction, the theory of structure, the accuracy of springs, gauges, dynamometer, etc., the efficiency of shafting, gearing, etc. The equipment will include a 100-ton Wicksteed and a 75-ton Emery machine for testing the tensile, compressive and transverse strength of materials. For the former, an addition has been specially designed, by means of which the transverse strength of timbers up to 25 feet in length can be determined. The Emery machine is constructed and gra-

duated with such accuracy as to render possible delicate experiments on elasticity. The Laboratories are also provided with an autographic torsion machine for testing the torsional strength of materials, machines for determining the effect of repeated stresses, oil testers, steam extensometers, etc., and a very complete supply of gauges, micrometers, and other apparatus for exact measurements.

Laboratory of Mechanics.—This Laboratory is fully equipped with a variety of apparatus, such as chronographs for measuring small intervals of time, pendulums for determining the acceleration of gravity and other dynamical constants, machines (Attwood's and Morin's) for deducing the laws of falling bodies, etc. Frequent practical questions are given to test the thorough character of the Student's mathematical knowledge.

Cement Testing Laboratory.—The importance of tests of the strength of mortars and cements is very great, and the equipment of the Laboratory for the purpose is on a complete plan, including a one-ton dead weight tester, a one-ton spring tester (Faija), steaming apparatus, special weighing hopper, spring balance, gun metal moulds, etc. The Laboratory is also fitted with cisterns in which the briquettes may be submerged for any required time.

Hydraulic Laboratories.—Here the Student will study practically the flow of water through orifices of various forms and sizes, submerged openings, over weirs, through pipes, mouth-pieces, etc. For this purpose there are suitably designed tanks, the largest having a height of 30 feet and a section of 25 square feet, pressure gauges of different kinds, and other apparatus. The Students will also themselves carry out tests upon hydraulic motors, *e.g.*, upon the different classes of turbines, pumps, the Knight and other wheels, etc. The facilities for conducting such experiments are unusually great, as from the city water supply there is an available head of over 200 feet.

Thermodynamic Laboratories.—The Thermodynamic Laboratory is furnished with an experimental steam engine of 80 I.H.P., specially designed for the investigation of the behaviour of steam under all possible conditions; there are four cylinders, which can be connected so as to allow of single, compound, triple or quadruple expansion, condensing or non-condensing, with or without jackets.

The measurements of heat are made by large tanks, which receive the condensing water and the condensed steam. There are two hydraulic absorption brakes for measuring the mechanical power developed, and an alternative friction brake for the same purpose. The Laboratory is further equipped with a variety of apparatus for the investigation and illustration of the general principles of thermodynamics, including hot air and other engines, indicators, pyrometers, pressure gauges, etc.

Electrical Laboratories.—The equipment of the Electrical Engineering Laboratory includes a high speed steam engine coupled direct to a dynamo for incandescent lighting; a slow speed steam engine for driving the experimental dynamos. These latter have been chosen to represent the best types now in general use, both of high tension and low tension direct current dynamos—with various methods of winding, and also of alternating current dynamos of low tension, and of high tension for use with transformers.

Arrangements have been made for measuring mechanical power supplied to the dynamos and given out by the electro-motors, of which there are several types; these arrangements comprise various forms of belt, rope and transmission dynamometers, with a very perfect form of hydraulic absorption dynamometer, with which the accuracy of the others can be checked by readings in absolute measure; the well-known form of cradle dynamometer, for dynamo testing, finds a place here, and special facilities are provided for varying the speed of the dynamos within any required limits.

The instruments for making the electrical measurements have been selected with much care; these instruments will enable measurements of current resistance and difference of potential to be made with great accuracy, not only in the detached laboratories but in the dynamo-room when the machinery is running; in separate rooms there are standard instruments of extreme precision with which the correctness of the working instruments can be readily checked. These include, amongst others, two of Sir William Thomson's electric balances. There are also a variety of instruments for special purposes connected with electrical measurements, such as instruments for determining coefficients of self and mutual induction, etc.

GEODETIC LABORATORY.—In this Laboratory will be placed a Rogers' comparator for the investigation of standards of length, and linear and angular dividing engines for the graduation and investigation of standards of length and of angular instruments. The Laboratory will also contain absolute standards of length up to one hundred feet for standardizing chains, tapes, rods, etc., pendulums and other apparatus for the determination of gravity, etc.

CHEMICAL LABORATORIES.—The Chemical Laboratories are three in number, one for Students of the First Year, one for Students of the Second and Third Years, in which it has been found necessary to carry on both qualitative and quantitative work, and one which is reserved for Students of the Fourth Year and for special Students who may wish to carry on original investigations. The fittings of this last room were the gift of Mr. W. C. McDonald, and are quite equal to those found in the best laboratories abroad. Besides the above there is also a special room in the basement which is fitted up for fire assaying.

The Laboratories are supplied with four balances by Becker & Sons, one Bunge and a bullion-balance by Trœmner. There are also a Laurent polariscope, a spectroscope by Dubosque, gas combustion and melting furnaces, apparatus for electrolytic work, etc., etc. Distilled water is obtained by means of a special boiler placed in the basement, which also supplies the steam for drying ovens, steam-baths and drying chamber in the upper Laboratories.

MUSEUMS.

The Peter Redpath Museum contains large and valuable collections in Botany, Zoology, Mineralogy and Geology, arranged in such a manner as to facilitate the work in these departments. Students have access to this Museum, in connection with their attendance on the classes in Arts in the subjects above named, and also by tickets which can be obtained on application. Students will also have the use of a Technical Museum, occupying the whole of the third story of the McDonald Building. Amongst other apparatus the Museum will contain the Reuleaux collection of kinematic models, presented by W. C. McDonald, Esq., and pronounced by Professor Reuleaux to be the finest and most complete collection in America.

WORKSHOPS.

The workshops erected on the Thomas Workman Endowment are now completed, and have a floor area of more than 25,000 sq. ft.

The practical instruction in the workshops is solely designed to give the Student some knowledge of the nature of the materials of construction, to familiarize him with the more important hand and machine tools, and to give him some manual skill in the use of the same. For this purpose, the Student, during a specified number of hours per week, will work in the shops under the direct superintendence of the Professor of Mechanical Engineering, aided by skilled mechanics. The courses commence with graded exercises and gradually lead up to the making of joints, members of structures, frames, etc., finally concluding in the iron-working department with the manufacture of tools, parts of machines, and, if possible, with the building of complete machines.

The equipment includes the following:—

In the Carpenter, Wood-Turning and Pattern Making Departments.—Carpenters' and pattern makers' benches, wood-lathes, a large pattern-maker's lathe, circular-saw benches, jig and band saws, buzz planer, wood-borer, etc.

In the Machine Shop.—The most improved engine lathes, a 36-in. modern upright drill, with compound table, universal milling machine, with vertical milling attachment, hand lathes, planer, universal grinding machine, universal cutter and reamer grinder, a 16-in. patent shaper, vise-benches, etc.

In the Forge Shop.—Forges, vises, hand-drill, and a 1 cwt. gas hammer.

In the Foundry.—A cupola for melting iron, brass furnace, moulders' benches, etc.

The whole of the machinery in the shops is driven by a 50 I. H. P. compound engine.

DRAWING ROOMS.

The drawing classes will be held in the lofty room occupying the whole of the fourth floor, which is lighted from the roof, and has a floor area of nearly 9000 sq. ft.

The instruction embraces Freehand and Model Drawing, Descriptive Geometry and Topographical Drawing, the preparation of Drawings of Parts of Machines and others structures, and finally concludes with complete machine or structural designs carried out under the direct supervision of the several Professors.

OBSERVATORY.

The instruction in Practical Astronomy will include determinations of time, latitude and longitude.

Latitude, by the zenith-telescope and prime vertical methods. Longitude, by telegraphic method and by lunar culminations and distances.

FACULTY OF APPLIED SCIENCE—TIME TABLE.

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
FIRST YEAR.	9	Drawing.	Drawing.	Mathematics.	Mathematics.	Mathematics.	Shopwork.
	10	Mathematics.	Mathematics.	Mathematics.	Mathematics.	Mathematics.	Do
	11	English.	French.	French.	French.	English.	Do
	12	Chemistry.	German.	English.	German.	Chemistry.	Do
	2 to 5	Geom. Drawing.	Geom. Drawing (*a*). Pract. Chemistry, (*b*)	Shopwork.	Freehand Drawing.	Pract. Chemistry.	
SECOND YEAR.	9	Mathematics.	Mathematics.	French.	Mathematics.	French.	Shopwork, 1, 2, 3, 4.
	10	Physical Laboratory.	German.	Mathematics.	Mechanism, 2, 3. Surveying, 1, 4. Chemistry, 5.	German.	Do
	11	Do	Zoology, 1, 4.	Mathematics. Botany, 5.	Zoology, 1, 4.	Mathematics.	Do
	12	Do Botany, 5.	Exp. Physics.	Mechanism, 2, 3. Surveying, 1, 4.	Exp. Physics.	English.	Do
	2 to 5	Mapping, 1. Mechl. Drawing, 2, 3. *Chemistry, 4, 5.	Surveying (1 hr.), 1, 4. Desc. Geom., 1, 2, 3, 4, 5.	Shopwork, 1, 2, 3, * Chemistry, 4, 5.	Mapping. 1, 4. Mechl. Drawing, 2, 3. * Chemistry, 5.	Phys. Lab., 1, 2, 3, 5.	

* The Chemical Laboratories are open to Second, Third and Fourth Year classes daily (Saturdays excepted) from 9 a.m. to 5 p.m.

Field work during September and October, 2 to 5 p.m. For 2nd Year *Civil*, on Mondays, Tuesdays, Wednesdays, Thursdays and Fridays. For *Mining*, on Mondays, Tuesdays, Thursday and Fridays. For 3rd Year *Civil*, on Mondays, Wednesdays, Thursdays and Fridays. For 4th year *Civil*, on Saturday mornings and two first clear evenings each week, 7 to 9.

a, *b*, 1, 2, 3, 4, 5. See bottom of next page.

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
THIRD YEAR.	9	Exp. Physics.	Surveying, 1. Phys. Lab., 3. Mineralogy, 4, 5. (*b*)	Desc. Geom., 1. Shopwork, 2, 3.	Exp. Physics.	Surveying, 1. Mineralogy, 4, 5.	Testing Lab
	10	Geology, 1, 4, 5. Dyn. of Mach., 2, 3.	Phys. Lab., 2.	Desc. Geom., 1. Shopwork, 2, 3. Mining, 4.	Mechanism, 1, 4. Chemistry, 5.	Geology, 1, 4, 5. Dyn. of Mach., 2, 3.	Do
	11	Mathematics.	Ap. Mech., 1, 3, 4. Phys. Lab., 2. Zoology, 5.	Desc. Geom., 1. Shopwork, 2, 3.	Mathematics. Zoology, 5.	Ap. Mech., 1, 3, 4. Phys. Lab., 2.	Do
	12	Surveying, 1. Mining, 4.	Ap. Mech., 1, 3, 4. Phys. Lab. 2.	Shopwork, 2, 3. Mechanism, 1, 4.	Mathematics.	Ap. Mech., 1. Phys. Lab., 2. Mining, 4.	
	2 to 5	Mapping, 1. Shopwork, 2, 3. Chemistry, 4, 5.	Drawing, 1, 2, 3, 4. Chemistry, 5.	Phys. Lab., 1, 2, 3, 5 Chemistry, 4, 5.	Mapping, 1. Drawing, 2,3. Detr. Mineralogy, 4, 5.	Testing Lab., 1. Phys. Lab., 2, 4. Thermo Lab., 3. Chemistry, 5.	
FOURTH YEAR.	9	Geodesy.	Elect. Lab., 2. Mechl. Lab., 3.	Hydraulic Lab., 1, 3, 4 (*a*) Elect. Lab., 2. Geology, 5.	Thermodynamics.	Phys. Lab., 2. Thermo. Lab., 3.	Shopwork, 2, 3.
	10	Hydraulics, 1, 3, 4. Elect. Eng'ng., 2.	Do Metallurgy. 4.	Hydraulic Lab., 1, 3, 4 (*a*). Elect. Lab, 2.	Hydraulics, 1, 3, 4. Elect. Eng'ng., 2. Metallurgy, 4	Geodesy, 1. Phys. Lab., 2. Thermo. Lab., 3.	Do
	11	Mathematics, 1, 2, 3. Geology, 4.	Ap. Mech., 1. Elect. Lab., 2. Mechl. Lab., 3.	Do	Mathematics.	Ap. Mech., 1. Phys. Lab., 2. Thermo. Lab., 3. Geology, 4.	Do
	12		Do	Elect. Lab., 2. Mineralogy, 4, 5.	Do	Ap. Mech., 1. Phys. Lab, 2. Thermo. Lab., 3.	Do
	2 to 5	Shopwork, 1. Designing, 2, 3. Assaying, 4. Chemistry, 5.	Designing, 1, 4. Elect Lab., 2. Mechl. Lab., 3. Chemistry, 5.	Designing, 1, 3. Elect. Lab, 2. Assaying, 4. Chemistry, 5.	Testing Lab., 1. Phys. Lab., 2. Designing, 3. Assaying, 4. Chemistry, 5.	Phys. Lab, 2. Thermo. Lab., 3. Chemistry, 5.	

(*a*) First Term. (*b*) Second Term.

1. Civil Engineering Course. 2. Electrical Engineering Course. 3. Mechanical Engineering Course. 4. Mining Engineering Course. 5. Practical Chemistry Course

§ XI. SYNOPSIS OF SUBJECTS AND TIME TABLE.

SUBJECTS OF INSTRUCTION, AND HOURS PER WEEK DEVOTED TO EACH SUBJECT.

		Civil Engineering.	Electrical Engineering.	Mechanical Engineering.	Mining Engineering.	Practical Chemistry.
FIRST YEAR.	Chemistry	5 to 8	5 to 8	5 to 8	5 to 8	5 to 8
	English	3	3	3	3	3
	French or German	3	3	3	3	3
	Mathematics	8	8	8	8	8
	Freehand Drawing	3	3	3	3	3
	Geometrical Drawing	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6
	Shopwork	7	7	7	7	7
SECOND YEAR.	Botany	—	—	—	—	2
	Chemistry	—	—	—	7	14
	English	1	1	1	1	1
	French or German	2	2	2	2	2
	Mathematics	6	6	6	6	2
	Mechanism	—	2	2	—	—
	Physics	2	2	2	2	2
	Surveying	3	—	—	3	—
	Zoology *	3	—	—	3	—
	Drawing	8	8	8	6	—
	Physical Laboratory	6	6	6	3	5
	Shopwork	3	6	6	3	—
THIRD YEAR.	Chemistry	—	—	—	6	16
	Determinative Mineralogy	—	—	—	3	3
	Dynamics of Machinery	—	2	2	—	—
	Geology and Mineralogy * *	2	—	—	4	4
	German	—	—	—	—	2
	Mathematics	3	3	3	3	—
	Mechanism	2	—	—	2	—
	Mining	—	—	—	3	—
	Physics	2	2	2	2	2
	Surveying	3	—	—	—	—
	Theory of Structures	4	—	3	3	—
	Zoology *	—	—	—	—	3
	Applied Mechanics Laboratory	6	3	3	—	—
	Drawing	9	6	6	3	—
	Physical Laboratory	3	9	3	3	3
	Shopwork	—	6	6	—	—
FOURTH YEAR.	Assaying	—	—	—	9	—
	Chemistry	—	—	—	—	24
	Electrical Engineering	—	2	—	—	—
	Geodesy	2	—	—	—	—
	Geology and Mineralogy * *	—	—	—	3 to 6	3
	Hydraulics	2	—	2	2	—
	Mathematics	3	3	3	2	—
	Metallurgy	—	—	—	2	—
	Theory of Structures	4	—	—	—	—
	Thermodynamics	1	1	1	—	—
	Applied Mechanics Laboratory	6	—	3	3 (a)	—
	Drawing (Designing)	6	3	9	—	—
	Electrical Laboratory	—	14	—	0	—
	Mechanical Laboratory	—	—	6	—	—
	Museum Work	—	—	—	6	—
	Physical Laboratory	Opt.	8	Opt.	Opt.	Opt.
	Shopwork	3	4	4	—	—
	Thermodynamic Laboratory	3	—	6	—	—

(a) First term.

* Besides study in the Museum.

* * Also Saturday excursions, and Museum and Petrographical work.

Faculty of Medicine.

THE PRINCIPAL (*ex-officio*).

Professors:

WRIGHT,	ROSS,	WILKINS,
MACCALLUM,	RODDICK,	PENHALLOW,
CRAIK,	GARDNER,	MACDONNELL,
FENWICK,	SHEPHERD,	MILLS,
GIRDWOOD,	BULLER,	CAMERON,
	STEWART.	

Dean.—R. CRAIK, M.D.
Vice-Dean.—GEORGE ROSS, M.D.
Registrar.—J. STEWART, M.D.
Librarian.—F. J. SHEPHERD, M.D.

The Fifty-Ninth Session of this Faculty will be opened on Thursday, October 1st, 1891, by an introductory lecture at 3 p m. The regular lectures will begin on October 2nd, at the hours specified in the time table, and will be continued for six months.

The new building of the Medical Faculty, which was opened in the year 1885, is one of the most complete structures of its kind on this continent or elsewhere. It has been found admirably adapted for the fulfilment of the great aim of the Faculty—to make the teaching of the primary branches as practical and as thorough as possible. The facilities now possessed by the Faculty for the above purpose are equal to those of the most advanced European medical schools.

In addition to the laboratories and dissecting room, there are two large lecture rooms, each capable of comfortably seating 300 students and one small demonstration room for classes of 50 and under. The space allotted to the library and museum has been largely increased.

The Dissecting Room, which is situated on the second floor, is 76 feet in length and 31 feet in breadth. It is furnished with twenty tables, and is well lighted for work during the day and night. In procuring appliances for the comfort and convenience of the Students, no reasonable expense has been spared.

The Physiological Laboratory, which is situated on the ground floor, is supplied with the most modern apparatus for the practical teaching of this most important branch of the medical curriculum. It contains amongst other valuable instruments,—kymographs, various manometers, etc., for demonstrating blood pressure; myographs, rheocords, moist chambers, etc., and various electrical appliances for demonstrating experiments in connection with nerve and muscle: special apparatus for illustrating various points in respiration; apparatus specially suitable for demonstrating the processes of digestion, as well as the chemical composition and nature of the secretions, and the chief constituents of the tissues and nutritive fluids. The Laboratory is arranged in such a way as to permit of Students assisting at and taking part in these demonstrations. During the past session important additions have been made to the Physiological Laboratory.

The Histological Laboratory is a large, well-lighted room on the second floor. It is so arranged that over eighty students can be present at the microscopical demonstrations. From the large number of microscopes employed, Students will have special facilities in studying and making themselves thoroughly acquainted with the specimens that are the subjects of demonstration.

The Pharmacological Laboratory is a large room situated on the ground floor, and is now furnished with the necessary appliances for the practical teaching of pharmacy.

The Chemical Laboratory is large, lofty, and well lighted, and can accommodate comfortably 76 men at one time. Each Student, when entering on this course, has a numbered table in the laboratory assigned to him for his use during the session. Each table has its own gas and water fixtures, and is provided with shelves for its corresponding set of reagent-bottles, as well as a drawer and locker containing a modern set of chemical apparatus specially adapted for the work. This apparatus is provided by the Professor of Chemistry, and supplied to each Student without extra charge.

The Student is required to pay only for apparatus broken or destroyed.

In the Pathological Laboratory accommodation will be provided for Students or practitioners who desire to carry on private pathological research.

The recent additions made to the Laboratory include a suite of rooms exclusively devoted to the study and culture of Bacteria, furnished with a complete outfit of the best modern apparatus for this purpose, including sterilizer, thermostat, etc., etc.

The class tickets for the various courses are accepted as qualifying candidates for examination before the various Colleges and Licensing bodies of Great Britian and Ireland, and the College of Physicians and Surgeons of Ontario. The degree in Medicine of this University carries with it at the Licensing Boards of Great Britain the same exemption in certain subjects as are granted to all colonial degrees.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of the Province of Quebec.

I. MATRICULATION.

It is very important that intending Students should note the following facts and regulations :—

1. If residents of Ontario, and desirous of obtaining the license of that Province, they must conform to the regulations regarding the Preliminary Examination, and register before beginning their medical studies.

2. If residents of the Province of Quebec, and desirous of obtaining the license of that Province, they must pass the Matriculation Examination of the Quebec Medical Board before beginning their medical studies.

In the event of a resident in the Province of Quebec producing a Certificate of Matriculation from any of the other Provinces of the Dominion, he will be required to make a declaration that he had

not obtained it with the object of avoiding the examination of the Quebec Medical Board.

3. Residents of the Maritime Provinces, Manitoba or British Columbia may either pass the Preliminary Examination of their respective Medical Boards or the Matriculation Examination of this University.

(A).—UNIVERSITY MATRICULATION EXAMINATION.

The Preliminary Examination in General Education of the following Bodies is accepted by the University in lieu of its own Matriculation Examination :—

1. The College of Physicians and Surgeons, Ontario.
2. The College of Physicians and Surgeons, Quebec.
3. The New Brunswick Medical Board.
4. The Nova Scotia Medical Board.
5. The Manitoba Medical College.

Graduates and Matriculates in Arts of all recognized Universities are exempt from examination. Any Student who is unable to present proof of having passed any one of the above, or other equally satisfactory examinations, will be required to undergo the matriculation examination, either in Arts or Medicine, of this University. These examinations are as follows :—

(1) *The Matriculation Examination in Arts* is held twice yearly on the 1st of June and following days, and on the 14th of September and following days.

Papers for the June examination can be sent to local centres on application to the secretary of the University. The September examinations are held in Montreal only.

The subjects for examination are Classics, Mathematics and English.

Greek.—Xenophon, Anabasis, Book I.; Greek Grammar.

Latin.—Cæsar, Bell. Gall., Book I. ; and Virgil, Æneid, Book I., lines 1-300 ; Latin Grammar.

Mathematics.—Arithmetic, including the Metric System ; Algebra, to Simple Equations (inclusive), Euclid's Elements, Books I., II., III. (In June, 1892, to Quadratics inclusive.)

English.—Writing from Dictation. A paper on English Grammar, *including* Analysis. A paper on the leading events of English History. Essay on a subject to be given at the time of the examination.

An equivalent amount of other books or other authors in Latin or Greek than those named may be accepted in the September examination, on application through the Professor of Classics.

(2) *The Medical Matriculation Examination* is the same as that required by the Medical Council of Great Britain.

This Examination will be held on the last Friday and Saturday in March, and the third Friday and Saturday in September of each year. Application may be made to Dr. Howe, the examiner, till the evening of the previous day. The requirements of the standard for Matriculation are:—(1) English Language, including Grammar and Composition. (2) English History. (3) Modern Geography. (4) Latin, including Translation from the original, and Grammar. (5) Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof. (6) Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics and Hydrostatics. (7) One of the following optional subjects:—(*a*) Greek, (*b* French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry.

TEXT-BOOKS.—Latin, Cicero, in Catilinam I.; or Virgil, Æneid, Bk. I.

GREEK.—Xenophon, Anabasis, Bk. I., or Homer's Iliad, Bk. IV.

FRENCH.—Voltaire's Charles XII., I., and II. Books.

NATURAL PHILOSOPHY.—Ganot's Physics, Books I, II and III.

BOTANY.—Gray's "How Plants Grow."

ELEMENTARY CHEMISTRY.—Storer and Elliot's Manual.

(B).—MATRICULATION EXAMINATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

Graduates in Arts of any British or Canadian University are exempted from this examination on presentation of their Diplomas.

LATIN.—Cæsar's Commentaries, Bks. I., II., III., IV.—Virgil's Æneid, Bks. I. and II.—The Odes of Horace, Bk. III.

ENGLISH.—A play of Shakespeare, viz., "Henry IV.," Part I., for 1891; "Henry IV.," Pt. II., for 1892.

FRENCH.—Fénélon's "Aventures de Télé maque." Molière, Le Bourgeois Gentilhomme, and La Fontaine, Fables, Books I., II. and III.—Translations into French of easy English extracts.

BELLES LETTRES AND RHETORIC.—Principles of the subject. History of the Literature of the age of Pericles in Greece, of Augustus in Rome, the 17th and 18th centuries of England and France.

HISTORY.—Outlines of the History of Greece and Rome, with particular knowledge of England, France and Canada.

GEOGRAPHY.—A general view, with particular knowledge of England, France and North America.

ARITHMETIC. Must include Vulgar and Decimal Fractions, Simple and Compound Proportions, Interest and Percentages, and Square Root.

ALGEBRA.—Must include Fractions and Simultaneous Equations of the First Degree.

GEOMETRY.—Euclid, Books I., II., III., IV. and VI., or the portion of Plane Geometry covered by those Books. Also the measurement of the lines, surfaces and volumes of regular geometrical figures.

Optional Subjects.

GREEK.—Xenophon's Anabasis, Book I.—Homer's Iliad, Book I., with Greek Grammar.

PHYSICS.—Outlines of the subject, as in Ganot's Physics, translated by Atkinson.

PHILOSOPHY.—Elements of Logic and of Moral Philosophy, as in Jevon's Logic and Calderwood's Handbook of Moral Philosophy.

The Examinations will be held in September, 1891, at Quebec, and in May, 1892, at Montreal. Applications to be made to Dr. F. W. Campbell, Montreal, or Dr. Belleau, Quebec, either of whom will furnish schedule giving text-books and percentage of marks to be obtained.

Examination Fee, ten dollars. Should the candidate be unsuccessful, one half of the fee will be returned.

Of the four years' study *after* having passed the Matriculation Examination, three six months' sessions, at least, must be attended at a University, College or Incorporated School of Medicine, recognized by the "Provincial Medical Board." The first session must be attended during the year immediately succeeding the Matriculation Examination, and the final session must be in the fourth year.

(c).—MATRICULATION EXAMINATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

Every one desirous of being registered as a Matriculated Medical Student in the Register of this College, except as hereinafter provided, must present to the Registrar, Dr. Pyne, Toronto, the official certificate of having passed the 2nd class Teachers' examination, with Latin option; whereupon he shall be entitled to be so registered, upon the payment of twenty dollars and giving proof of his identity.

Graduates in Arts, or Students having matriculated in Arts in any University in Her Majesty's Dominions, are not required to pass the Matriculation Examination, but may register their names with the Registrar of the College, upon giving

satisfactory evidence of their qualifications, and upon paying the fee of twenty dollars.

§ II.—ENREGISTRATION.

The following are the University Regulations :—

All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty.

The said Register shall be closed on the last day of October in each year. Fees are payable to the Registrar, and must be paid in advance at the time of enregistration.

§ III.—COURSES OF LECTURES.

ANATOMY.

PROFESSOR, FRANCIS J. SHEPHERD.

Anatomy is taught in the most practical manner possible, and its relation to Medicine and Surgery fully considered. The lectures are illustrated by the fresh subject, moist and dry preparations, sections, models and plates, and drawings on the blackboard.

Special attention is devoted to Practical Anatomy, the teaching being similar to that of the best European schools. The Dissecting Room is open from 8 a.m. to 10 p.m., the work being conducted under the constant supervision of the Professor and his staff of Demonstrators. Special Demonstrations on the Brain, Thorax, Abdomen, Bones, etc., are frequently given. Every Student must be examined *at least* three times on each part dissected, and if the examinations are satisfactory, a certificate is given. Prizes are awarded at the end of the Session for the best examination on the fresh subject. Abundance of material provided.

CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

LECTURER, R. F. RUTTAN.

Inorganic Chemistry is fully treated ; a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. For experimental illustration abundant apparatus is possessed by the College.

The Chemical Laboratory will be open to the members of the class, to repeat experiments performed during the course under the superintendence of the Professor or Lecturer.

PRACTICAL CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

LECTURER, R. F. RUTTAN.

The course in Practical Chemistry includes two hours' laboratory work three times a week for three months. The Students are instructed individually in chemical manipulations, blow-pipe analysis, and qualitative determination of the salts, acids, etc., they will require to use in practice. They are required before finishing their course to be familiar with the principles of practical Forensic and Sanitary Chemistry. Special attention is directed to instructing the Student in making accurate notes of his experiments and his conclusions. These notes are examined daily, and criticized.

PHYSIOLOGY.

PROFESSOR, T. WESLEY MILLS.

The purpose of this Course is to make Students thoroughly acquainted, as far as time permits, with modern Physiology : its methods, its deductions, and the basis on which the latter rest. Accordingly a full course of lectures is given, in which both the Experimental and Chemical departments of the subject receive attention.

In addition to the use of diagrams, plates, models, etc., every department of the subject is experimentally illustrated. The experiments are free from elaborate *technique*, and many of them are of a kind susceptible of ready imitation by the Student.

Laboratory work for Senior Students :—

(1) During the first part of the Session there will be a course on Physiological Chemistry, in which the Student will, under direction, investigate food stuffs, digestive action, blood, and the more important secretions and excretions, including urine. All the apparatus and material for this course will be provided.

(2) The remainder of the Session will be devoted to the performance of such experiments as are unsuitable for demonstration to a large class in the lecture room, and such as require the use of elaborate methods, apparatus, etc. There will be no extra fee for this part of the course.

HISTOLOGY.

PROFESSOR, GEO. WILKINS.

This will consist of a course of ten lectures and twenty-five weekly demonstrations with the Microscope. As the demonstrations will be chiefly relied upon for teaching the Microscopic Anatomy of the various structures, the specimens under observation will then be minutely described. Plates and diagrams specially prepared for these lectures will be freely made use of.

PHARMACOLOGY AND THERAPEUTICS.

PROFESSOR, JAMES STEWART.

The course on this subject comprises :—

I. A description of the Pharmacology and Therapeutics of the more important medicinal agents.

II. The delivery of a weekly lecture ("Clinical Therapeutics") in the theatre of the General Hospital, on some case or groups of cases well adapted for illustrating important points in both general and special Therapeutics. The material for these lectures is abundant, being obtained from both the wards and the out-door clinics. Electro Therapeutics will also be dealt with in this part of the course.

III. The attendance during the summer session of a course on Practical Materia Medica.

MEDICINE.

PROFESSOR, GEORGE ROSS.

While the lectures on this subject are mainly devoted to Special Pathology and Therapeutics, no opportunity is lost of illustrating and explaining the *general* laws of disease. With the exception of certain affections seldom or never observed in this country, all the important internal diseases of the body, except those peculiar to Women and Children, are discussed, and their Pathological Anatomy illustrated by the large collection of morbid preparations in the University Museum, and by fresh specimens contributed by the Demonstrator of Morbid Anatomy.

The College possesses an extensive series of Anatomical plates, illustrative of the Histological and Anatomical appearances of disease, and the wards of the General Hospital afford the lecturer ample opportunities to refer to living examples of very many of the maladies he describes, and to give the results of treatment.

CLINICAL MEDICINE.

PROFESSOR, R. L. MACDONNELL.

Attendance is given in the Medical Wards of the Montreal General Hospital on three days of every week with the 3rd year Students, and three days with those of the 4th year. Accurate reports of all cases are kept by duly appointed clinical clerks, and are systematically read before the class. Instruction is given at the bedside, and every pupil is required to take part in the physical examination of patients. The mode of conducting investigations, the use of the microscope, the value of the thermometer and ophthalmoscope, etc., in medical diagnosis, are all explained and illustrated. Senior Students are called upon in rotation to examine new cases before the class, and to be examined thereon as to their general knowledge. In addition, one weekly Clinical Lecture is delivered, bearing upon some case or cases of importance which may happen to be under observation at the time. Special attention is directed to Medical Anatomy, and candidates for the degree will be examined thereon.

SURGERY.

PROFESSOR, THOMAS G. RODDICK.

The first part of this course consists of Surgical Pathology, illustrated by a large collection of preparations from the College Museum, also specimens as they are obtained from cases under observation at the Hospital, and contributed to that collection by the Hospital pathologist, and from private sources. The second part of the course is devoted to the practice of Surgery, in which attention is drawn to cases which have been observed by the class during the previous summer session. The various surgical appliances are exhibited, and their uses and application explained. Surgical Anatomy and Operative Surgery form a special department of this course, and Quain's and Maclise's plates are used in illustration.

CLINICAL SURGERY.

PROFESSOR RODDICK.

LECTURER, JAMES BELL.

This course is eminently practical, consisting of bedside instruction and lectures delivered weekly, illustrative of surgical cases actually present in the wards of the General Hospital. The class is separated into junior and senior divisions, which are taken charge of by the Professor on alternate days, when the reports of the Clinical clerks are read and criticized, and fresh cases are examined by the Senior Students. The surgical dressings are, as much as possible, reserved for these occasions, so as to give all present an opportunity of participating in the application of splints to fractures, dressing of wounds, minor operations, etc. Major operations are performed in the theatre attached to the Hospital, which is so constructed that the most distant can obtain a fair view of the operations. All the recently invented appliances for the treatment of surgical disease have been introduced into the Hospital.

MIDWIFERY.

PROFESSOR, J. C. CAMERON.

The course will embrace: 1. Lectures on the principles and practice of the obstetric art, illustrated by diagrams, fresh and preserved specimens, the artificial pelvis, complete set of models, illustrating deformities of the pelvis, wax preparations, bronze mechanical pelvis, etc. 2. Bedside instruction in the Montreal Maternity, including the management and after-treatment of cases. 3. A complete course on obstetric operations with the phantom and preserved fœtuses. 4. The Diseases of Infancy. 5. A course of individual clinical instruction at the Montreal Maternity.

Particular attention is given to clinical instruction, and a clinical examination in Midwifery, similar to that held in Medicine and Surgery, now forms part of the final examination.

GYNÆCOLOGY.

PROFESSOR, WM. GARDNER.

The course on this subject will comprise two lectures a week throughout the session. The anatomy and physiology of the parts concerned will be first discussed. Then the various methods of examination will be fully described, the necessary instruments exhibited, and their uses explained. After this, the diseases peculiar to the sex will be considered as fully as time will permit, in the following order:—Disorders of Menstruation; Leucorrhœa, its causes and treatment; Pelvic Cellulitis and Peritonitis; Lacerations of the Cervix Uteri and Perineum; Urinary and Fæcal Fistulæ; Inflammations of the Uterus; Displacements of the Uterus; Tumors of the Uterus; Diseases of the Ovaries.

The lectures will be illustrated as fully as possible by drawings and morbid specimens. The Gynæcological Clinic of the General Hospital furnishes the Professor with ample material to illustrate the subjects considered in the didactic lectures.

Particular attention is given to clinical instruction, and a clinical examination in Gynæcology, similar to that held in Medicine and Surgery, now forms part of the final examination.

MEDICAL JURISPRUDENCE.

PROFESSOR, GEO. WILKINS.

This course includes Insanity, the subject being treated of in its Medical as well as Medico-legal aspects. Special attention is devoted to the subject of blood stains, the Clinical, Microscopic and Spectroscopic tests for which are fully described and shown to the class. The various spectra of blood in its different conditions are shewn by Zeiss' Microspectroscope, so well adapted for shewing the reactions with exceedingly minute quantities of suspected material. Recent researches in the diagnosis of human from animal blood are alluded to. In addition to the other subjects usually included in a course of this kind, Toxicology is taken up. The modes of action of poisons, general evidence of poisoning, and classification of poisons are first treated of, after which the more common poisons are described, with reference to symptoms, post-mortem appearances, and chemical tests. The post-mortem appearances are illustrated by plates, and the tests are shown to the class.

OPHTHALMOLOGY AND OTOLOGY.

PROFESSOR, FRANK BULLER.

Will include a course of lectures on disease of the Eye and the Ear, both Didactic and Clinical. In the former, the general principles of diagnosis and treatment will be dealt with; in the latter, cases illustrative of the typical form of ordinary diseases of these organs will be exhibited and explained to the class, and afterward

placed under the special care of gentlemen who may show themselves competent to take charge of them. A course of Operations on the cadaver will be open to such Students as may wish to avail themselves of the same.

HYGIENE.

PROFESSOR, ROBERT CRAIK.

Comprises lectures on Drinking Water and Public Water Supplies; conditions of Soil and Water as affecting health, including Drainage and the various methods for the removal of Excreta; the Atmosphere, including Heating and Ventilation; Individual Hygiene, comprising the subjects of Food and Drink; Physical Exercise and Bathing; discussion of the respective merits of the various forms of each, precautions, contra-indications, etc., Village Sanitary Associations; Mutual Protective Sanitary Associations for cities.*

BOTANY. †

PROFESSOR, D. P. PENHALLOW.

The purpose of this course is to give Students a good grounding in the principles of General Morphology, and advance their knowledge of the comparative physiology of animals and plants, and enable them to determine readily such species of plants as may come under their observation.

It comprises:—

1. A course of lectures on general Morphology and Classification, Histology and Physiology. The lectures are illustrated by means of the microscope and by the models and large collections in the Peter Redpath Museum.

2. Practical work in the determination and classification of Species, for which the Botanic Gardens of the University offer special facilities.

3. Studies in Canadian Botany. This work is prosecuted by means of field excursions, which are held as often as opportunity is afforded during autumn months.

4. A special collection of Medicinal plants, now being formed at the Botanic Gardens, offers a valuable preparation to the course in Pharmacology.

ZOOLOGY. †

PROFESSOR, SIR WILLIAM DAWSON.

This course includes a systematic study of the classification of animals, illustrated by Canadian examples, and by the collections in the Peter Redpath Museum.

* Students may attend the Lectures on Sanitation in the Faculty of Applied Science,—Fee $6.

† Exemptions from Botany in the Matriculation, for Arts Students, do not entitle Students to exemptions in the First Year. Students may take in their first year either Botany or Zoology, subject, however, to the provisions of the law in the Province in which they intend to practice medicine. Students desirous to take both subjects in one year must apply to the Faculty for permission.

It forms a suitable preparation for collecting in any department of Canadian Zoology and Palæontology, and an introduction to Comparative Physiology. It may be taken instead of Botany, or along with it, without any additional feee. Students in Botany or Zoology will receive tickets to the Peter Redpath Museum and to the Museum of the Natural History Society of Montreal.

PATHOLOGY.

This course comprises :—

1. Twenty-five lectures on General Pathology to Students of the third year.

2. Weekly Pathological Demonstrations to Students of the third year. The gross and miscroscopic appearances of specimens collected during the week are demonstrated to the final classes. In addition, special demonstrations in Pathological Histology are given throughout the session.

3. Instruction in Post-Mortems. The Autopsy Room of the General Hospital is in charge of the Demonstrator. The post-mortems are performed by the Students in rota ion under his direction, and Systematic demonstrations of post-mortem methods, including those to be followed in Medico-Legal cases, will also be given.

PRACTICAL MICROSCOPY.

This is an entirely *Optional* Course, and will be conducted by Prof. Wilkins. It is intended especially for teaching the *technique* of Miscroscopy. Students will be shown how to examine blood, etc., also to cut, stain and mount specimens. Everything except over-glasses and cabinet cases provided. Fee $8.00.

---

§ IV.—QUALIFICATIONS FOR THE DEGREE.

The following are Extracts from the Regulations respecting the qualifications of Candidates for the Degree in Medicine :—

1st. No one entering after October 1st, 1884, will be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not have attended Lectures for a period of at least four six months' sessions and one three months' summer session* in this University, or some other University, College or School of Medicine approved of by this University.

---

*To be taken after 3rd Winter Session.

2nd. Candidates for final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz. :—

Provided, however, that Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted.

Anatomy.	Of which two courses will be required of six months' duration.
Practical Anatomy.	
Physiology.	
Chemistry.	
Materia Medica and Therapeutics.	
Principles and Practice of Surgery.	
Midwifery and Diseases of Women and Children.	
Theory and Practice of Medicine.	
Clinical Medicine.	
Clinical Surgery.	
Medical Jurisprudence.	Of which One Course of Six Months, or two Courses of Three Months, will be required.
Practical Chemistry.	Of which One Course will be required of Three Months' duration.
Botany or Zoology.	
Hygiene.	
Histology.	Ten Lectures and Twenty-five Demonstrations.
General Pathology.	Twenty-five Lectures.

3rd. The Candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University, and of having compounded medicines for six months.

4th. He must also give proof of having assisted at six autopsies.

5th. He must also give proof by ticket of having attended for at least six months the practice of the Montreal Maternity or other Lying-in-Hospital approved of by this University, and of having attended at least six cases of labor.

6th. No one will be permitted to become a candidate for examination who shall not have attended at least one Session of this University, and one full course of all the branches included in its curriculum.

7th. Courses of less length than the above will only be received for the time over which they have extended.

8th. Students, except by special permission of the Faculty, must pursue the subjects of Anatomy, Chemistry, Histology, and Botany in their first session, and are advised to take Physiology in addition.

9th. Candidates who fail to present themselves for to pass in any of the subjects of the first two years will be granted a supplemental examination at the beginning of the following session.

10th. Supplementary examinations will not be granted except by special permission of the Faculty, and on written application stating reasons, and accompanied by a fee of $2 for each class.

11th. No Candidate will be permitted to proceed with the work of the final year, until he has passed all the subjects comprised in the Primary Examination.

12th. Candidates who fail to pass in a subject of which two courses are required may, at the discretion of the Faculty, be required to attend a third course, and furnish a certificate of attendance thereon.

A course in Practical Anatomy will be accepted as equivalent to a third course of lectures in General and Descriptive Anatomy.

13th. The requirements for the summer session, when as at present taken after the third winter session, shall be:—

(*a*) Daily Hospital attendance;

(*b*) Maternity attendance; and

(*c*) Any two weekly clinics, in addition to the clinics in General Medicine and Surgery.

14th. Every Candidate for the Degree must, on or before the first day of March, present to the Registrar of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Registrar of the Faculty the following Certificate:—

MONTREAL,—— 18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise) that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or shall not be at that time) under articles as a pupil or apprentice to any Physician, Surgeon, or Apothecary.

(Signed, A. B.

15th. The trials to be undergone by the Candidate shall be such as are referred to under Section V.

16th. The following Oath or Affirmation will be exacted from the Candidate before receiving his degree:—

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A——B——, Doctoratus in Arte Medica, titulo jam donandus, sancto coram Deo cordium scrutatore, spondeo;—me in omnibus grati animi officiis erga hanc Universitatem, ad extremum vitæ halitum, perseveraturum; tum porro artem medicam caute, caste, et probe exercitaturum; et quoad in me est, omnia ad ægrotorum corporum salutem conducentia, cum fide procuraturum.; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

17th. The fee for the Degree of Doctor of Medicine and Master of Surgery shall be thirty dollars, to be paid by the successful Candidate immediately after examination.

§ V.—EXAMINATIONS.

Weekly examinations are held, to test the progress of the Student ; and in addition two or three written examinations are given throughout the Session .

The examinations at the close of each Session are arranged as follows :—

First Year.

Pass Examination in Botany, Histology and Visceral Anatomy.

Sessional Examination in Anatomy, Chemistry, and Physiology.

A due proportion of marks will be allowed for the Sessional Examination in each subject, which marks shall be reckoned in the ranking of the Candidate after the examination of the following year.

Second Year.

Pass Examination in Anatomy, Chemistry, Practical Chemistry, Physiology and Histology.

Sessional Examination in Pharmacology and Therapeutics.

One hundred marks will be allowed for the Sessional Examination, which marks shall be reckoned in the ranking of the Candidate after the examination of the following year.

Third Year.

Pass Examination in Pharmacology and Therapeutics, Medical Jurisprudence, Hygiene* and General Pathology.

Fourth Year.

Pass Examination in Medicine, Surgery, Obstetrics, Gynæcology, Clinical Medicine, Clinical Surgery and Clinical Obstetrics, Clinical Gynæcology, Practical Pathology.

By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the Primary and Final branches.

With regard to the Primary Examination at the end of the second year, it remains optional with the Student whether he passes in all the branches or leaves two for the third year. In any case, Chemistry and Anatomy must be taken at the close of the second year, except it be otherwise agreed to by the Faculty.

---

* The examinations in Hygiene are held at the close of the summer session.

§ VI.—MEDAL AND PRIZES.

1st. The Holmes Gold Medal, awarded to the Student of the graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches.

The Student who gains the Holmes Medal has the option of exchanging it for a Bronze Medal, and the money equivalent of the Gold Medal.

2nd. A Prize in Books awarded for the best examination, written and oral, in the Final branches. The gold medallist is not permitted to compete for this prize.

3rd. A Prize in Books awarded for the best examination, written and oral, in the Primary branches.

4th. The Sutherland Gold Medal, awarded for the best examination in Theoretical and Practical Chemistry, together with creditable examination in the Primary branches.

5th. A Prize in Books for the best examination in Practical Anatomy.

6th. Prizes in Botany and Zoology.

A Prize in Books for the best examination.

7th. The Clemesha Prize in Clinical Therapeutics, books to the value of $25.00.

---

§ VII.—FEES.

The total collegiate fees for all Students entering on and after the first of October, 1890, will be four hundred dollars, to be paid in four annual instalments of one hundred dollars each. The above sum represents the tuition for four winter and one summer sessions, and if the Student elects to attend the two other summer sessions of his course, he can do so without further payment. (For Fees of graduation, see § IV, clause 16, supra.)

All fees are payable in advance to the Registrar, and, except by permission of the Faculty, will not be received later than 1st November.

It is suggested to parents or guardians of Students that the fees be transmitted direct by cheque or P. O. Order, to the Registrar, who will furnish official receipts.

§ VIII.—TEXT BOOKS.

(*Prices current in Montreal.*)

ANATOMY.—Gray, Wilson, Quain (Eng. ed.).
PRACTICAL ANATOMY.—Heath's Dissector, Holden's Dissector, and Landmark's Ellis' Demonstrations.
PHYSICS.—Balfour, Stewart.
INORGANIC CHEMISTRY.—Millar, Wurtz's Elementary Chemistry.
ORGANIC CHEMISTRY.—Armstrong.
PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.
PHARMACOLOGY and THERAPEUTICS.—Wood, Lauder Brunton, Bruce.
PHYSIOLOGY.—Huxley's *Elementary Lessons*, Foster, Prof. Mill's Text-Book of Physiology and Outlines of Lectures.
PATHOLOGY.—Delafield and Prudden.
HISTOLOGY.—Klein's Elements, Schafer's Essentials of Histology.
SURGERY.—Holme's Surgery (Eng. ed.), Erichsen, Druitt, Bryant, Treves.
PRACTICE OF MEDICINE.—Flint, Roberts, Bristowe, DaCosta, Fagge, Quain's, Dictionary.
FOR REFERENCE.—Pepper's System of Medicine.
CLINICAL MEDICINE.—Finlayson's Clinical Manual, Fenwiek on Medical Diagnosis, Warner on Medical Case Taking.
MEDICAL JURISPRUDENCE.—Husband, Guy and Ferrier, Reese.
MIDWIFERY.—Lusk, Galabin.
DISEASES OF CHILDREN.—Smith, Goodhart and Starr.
GYNÆCOLOGY.—Edis, Goodell's Lessons, Hart and Barbour's Manual, Thornburn Skene.
HYGIENE.—Parks, Wilson (Eng. ed.).
BOTANY.—Gray's Text-Book of Histology and Physiology.
ZOOLOGY.—Sir William Dawson's Handbook of Canadian Zoology.

---

§ IX.—MUSEUM.

For the past fifty years the rich Pathological material furnished by the Montreal General Hospital has been collected here. The Faculty are also greatly indebted to many medical men throughout different parts of the world for important contributions to the Museum.

During the past few years, numerous and extremely important additions have been made to the Medical Museum.

It is particularly rich in specimens of Aneurisms. In addition to containing a large number of the more common varieties of these formations, there are specimens of such rare condition as Aneurism of the Hepatic and Superior Mesenteric Arteries, Traumatic Aneurism of the Vertebral, together with several of the Cerebral and Pulmonary Arteries. The most important collection probably in existence, of hearts affected with "Malignant Endocarditis," is also found. The Faculty are indebted to Prof. Osler, late of this University, for this collection.

Obstetrical Department of the Museum.

Besides the ordinary pathological preparations, dry and moist, usually found in Museums, this department contains a complete set of models of deformed pelves, a series of preparations in wax, illustrating the normal relations of the pelvic organs, the development of the Uterus and its contents during pregnancy, various abnormalities, twin pregnancy, fœtal circulation, etc., a series of colored casts of frozen sections, Tarnier's artificial pelvis, Budin's bronze mechanical pelvis, models of obstetrical instruments, etc.

Additions are being constantly made, and ere long the department will possess a complete collection of models, casts, preparations and apparatus for the practical teaching and illustration of Obstetrics.

Anatomical Museum.

In addition to the already large collection of normal and abnormal osteology, comparative and human skeletons of various classes of animals, moist preparations and frozen sections, the following preparations have been recently obtained:—

(1) A series of articulated skeletons of fore and hind limbs of the various domestic animals, prepared by the articulator, Mr. Bailly.

(2) Numerous moist preparations presented by the Professor and Demonstrator of Anatomy.

(3) A complete set of Steger's beautiful colored casts, taken from the celebrated frozen sections of Professors His and Braune of Leipzig. These preparations have been placed in the Museum, so that they can be constantly consulted by the Students.

(4) (*a*) A complete set of Steger's brain sections ;

(*b*) Set of hardened brains with the various lobes, convolutions, ganglia, etc., in different colors ;

(*c*) Models of the cerebro-spinal and sympathetic nervous systems.

---

§ X.—LIBRARY.

The Library of the Medical Faculty now comprises upwards of thirteen thousand volumes, the largest special library connected with any medical school on this continent.

The standard text-books and works of reference, together with complete files of the leading periodicals, are on the shelves. Students may obtain books on making a deposit of $5, which is refunded on returning the volumes.

---

§ XI.—McGILL MEDICAL SOCIETY.

This Society, composed of enregistered Students of the Faculty, meets once a week during the Summer Session, and fortnightly during the Winter, for the reading of papers and the discussion of medical subjects. It is presided over by a physician chosen by the members.

A reading room has been established in connection with the Society, in which the leading English and American Medical journals are on file.

The leading daily and weekly newspapers of the Dominion are also kept on file.

---

§ XII.—COST OF LIVING, &c.

This will, of course, vary with the taste and habits of the Student But the necessary expenses need not exceed those in smaller towns Good board may be obtained from $15 to $20 per month. A list of boarding houses is prepared annually by the Secretary of the University, and may be procured from the Janitor at the Medical college.

§ XIII.—HOSPITALS.

Montreal General Hospital.

The Montreal General Hospital is the most extensive clinical field in the Dominion. A much larger number of in-door and out-door patients receive treatment there than in any other Canadian Hospital. Last year's report shows that 2,565 Medical and Surgical cases were treated in the wards, and the great proportion of these were acute cases, as may be gathered from the fact that the average duration of residence was only 23.6 days.

The large number of out-door patients that are treated in the Hospital—upwards of 30,000 annually—supply illustrations of most of the diseases of infants and children, of very many of the eye and skin, and of those chronic and ill-defined ailments, which, as they do not require admission to the wards of a hospital, would not otherwise come under the observation of the Student.

The large number of patients affected with diseases of the eye and ear, now attending the out-door department, will afford Students ample opportunity to become familiar with all the ordinary affections of those organs, and to make themselves proficient in the use of the ophthalmoscope, and it is hoped that every Student will thus seek to gain a practical knowledge of this important branch of Medicine and Surgery. Operations are performed on the eye by the Ophthalmic Surgeon after the out-door patients have been seen, and Students are invited to attend the same, and, as far as practicable, to keep such cases under observation so long as they remain in the Hospital.

There are now special departments in the Hospital for Gynæcology and Laryngology, presided over by specialists in these branches. Students are thus enabled to acquire special technical knowledge under skilled direction. The plan of teaching practical gynæcology for the past five years with marked success has been the limitation of the number of Students to two or three, who, in rotation, assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases and the use of gynæcological instruments.

Recently two additional special clinics have been instituted in connection with the Out-door Department: one for diseases of children and the other for diseases of the nervous system.

CLINICAL CLERKS in both medical and surgical wards are appointed every three months, and each one during his term of service conducts, under the immediate direction of the Clinical Professors, the reporting of all cases in the ward allotted him. The holding of one of these offices is found to be of the greatest possible advantage to Students, as affording a true *practical* training for future professional life. They will be awarded on application at the end of each Session to final Students of that year, in order of their standing in the primary examination.

DRESSERS are also appointed to the Surgical wards and to the Out-door Department. For these appointments, application is to be made to the Professor of Clinical Surgery and to the assistant Surgeons.

The Operating Room (used also for a lecture room) is so constructed as to enable the Students to obtain a good view of the operations.

Montreal Dispensary.

ST. ANTOINE STREET.

Over 12,000 patients yearly are treated at this Institution. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and excellent practice is afforded in the application of splints and bandages. The attending Physicians furnish Students with all possible facilities. The hours of attendance are from 12 to 2 daily during the winter session, and from 4 to 6 p. m. during the summer session.

The Montreal Maternity.

The Faculty have great pleasure in announcing that the Corporation of the Montreal Maternity have recently made very important additions to their building, and have still further improvements in contemplation. Students will therefore have greatly increased facilities for obtaining a practical knowledge of Obstetrics. An improved Tarnier-Budin phantom is provided for the use of the Students, and every facility afforded for acquiring a practical knowledge of the

various obstetric manipulations. The institution is under the direct supervision of the Professor of Midwifery, who devotes much time and attention to individual instruction. Students who have attended one course of lectures are furnished with cases in rotation, which they are required to report and attend till convalescence. Clinical Midwifery having been placed upon the same basis as Clinical Medicine and Surgery, and a final clinical examination instituted, Students will find it very much to their advantage to pay special attention to their clinical work during the summer session. Though only six cases are required to qualify for the license of the Ontario and Quebec Medical Boards, twenty cases are demanded by the licensing bodies of Great Britain. A sufficient number of cases will be assigned to Students who contemplate presenting themselves for British qualifications. Two resident Accoucheurs are appointed yearly from the graduating class to hold office for a period of six months each. By an arrangement with the authorities of the Montreal General Hospital, one of the residents acts as Clinical assistant to the Gynæcologists for a period of six months, a change which has greatly enhanced the value of this appointment.

---

§ XIV.—STUDENTS' APPOINTMENTS.

General Hospital—Five Resident Medical Officers.
Clinical Clerk, Gynæcology.
" " Laryngology.
" " Diseases of Children.
" " Dermatology.
" " Diseases of Nervous System.
University Maternity—Two Resident Medical Officers.
Out-door Dressers.
Dressers in Eye and Ear Department.
Surgical Dressers (in-door).
Medical Clinical Clerks.
Post-mortem Clerks.
Student Demonstrators of Anatomy, 4 third-year Students.
Prosectors to Chair of Anatomy, 2.
Assistants in Practical Histology Course, 2.
Assistants in Practical Physiology Course, 4.
Assistants in Practical Chemistry, 2.

§ XV —RULES FOR STUDENTS.

1. In the case of disorderly conduct, any Student may, at the discretion of the Professor, be required to leave the Class room. Persistence in any offence against discipline after admonition by the Professor shall be reported to the Dean of the Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from classes.

2. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

3. While in the College, Students are expected to conduct themselves in the same orderly manner as in the Class-room.

When Students are brought before the Faculty under the above rules, the Faculty may reprimand, impose fines, disqualify from competing for prizes and honors, suspend from Classes, or report to the Corporation for expulsion.

TIME TABLE—FIRST AND SECOND YEARS, 1891-92.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy Examination.	Anatomy.	Anatomy.	Anatomy.	Anatomy.	Physiology, 2nd Year.
10	* Practical Chemistry, 2nd Year, till 12 o'clock.	Practical Chemistry, Botany, 1st Year.	Practical Chemistry, 2nd Year.	Practical Chemistry, Botany, 1st Year.	Practical Chemistry, 2nd Year.	Practical Chemistry, Practical Physiology, Histology Demonstration.
11	Out-Patients, Montreal Gen'l. Hospital.	Out-Patients, Montreal Gen'l. Hospital. Zoology.	Out-Patients, Montreal Gen'l. Hospital.	Out-Patients, Montreal Gen'l. Hospital.	Out-Patients, Montreal Gen'l. Hospital. Zoology.	Out-Patients, Montreal Gen'l. Hospital.
P.M. 2	Physiology Examination, 2nd Year.	Physiology, 2nd Year.	Physiology, 2nd Year.	Physiology, 1st Year.	Physiology, 1st and 2nd Years.	
3	Chemistry Examination.	Chemistry.	Chemistry.	Chemistry.	Chemistry.	
4	Therapeutics Examination. Physiology, 1st Year.	Therapeutics, Physiology, 1st Year.	Therapeutics, Physiology, 1st Year.	Therapeutics,	Therapeutics, Histology Lectures, 1st Year.	
4 to 6		Practical Histology.		Practical Histology.		
A.M. 10to12	Practical Anatomy.	Practical Anatomy	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.

N.B.—The Demonstrator's Hours in the Dissecting Room from 10-12 a.m., and from 8-10 p.m. * Until Christmas only.

Faculty of Law.

Principal: Sir William Dawson, LL.D. (Ex Officio).
N. W. Trenholme, Q.C., M.A., D.C.L., Dean, and Gale Professor of Roman and International Law.
Honorable Mr. Justice Wurtele, D.C.L., Professor of the Law of Real Estate.
J. S. Archibald, Q.C., D.C.L., Professor of Commercial Law.
L. H. Davidson, Q.C., M.A., D.C.L., Professor of Commercial Law.
Christophe A. Geoffrion, Q.C., D.C.L., Professor of the Law of Contracts.
Archibald McGoun, M.A., B.C.L., Professor of Legal Bibliography.
Thomas Fortin, LL.L., B.C.L., Professor of Civil Procedure and Municipal Law.
W. DeM. Marler, B.A., B.C.L., Professor of Notarial Law.
C. J. Doherty, Q.C., B.C.L., Professor of Civil Law.
Harry Abbott, Q.C., B.C.L., Professor of Commercial Law.
Eugene Lafleur, B.A., B.C.L., Professor of Civil Law.

Dean of Faculty.—Professor Trenholme.
Secretary and Librarian of the Faculty.—Professor McGoun.
Corporation Examiners for Degrees—Professors Trenholme and Fortin.
Matriculation Examiners of the Faculty.—Professors Archibald and Lafleur

The Faculty of Law feels much satisfaction in being able to announce that the important step, so long and earnestly desired by all friends of the University, of placing the McGill School of Law on such a substantial and permanent basis as to enable it efficiently to perform its part in the great work of legal education in Canada, has been accomplished by the munificent endowment presented to the University by Mr. William C. McDonald. This endowment places the Faculty in a position to offer to those who desire to study the Law, either with a view to its practice as a profession or as a means of culture, or as a qualification for the discharge of the higher duties of citizenship, a comprehensive and complete course of legal study, with the use of library, reading room and other aids which have not heretofore been at the command of the Faculty. The course of study to be pursued, extending over a period of three years, and the instruction to be imparted, while designed thoroughly to qualify professional Students for the practice of their profession, will also fully

recognize the important fact, which, no doubt, was a main inducement for the action of the Faculty's generous benefactor, that upon the character of the Bar depends that of the Bench and of the administration of justice, and to a great extent also the character of the public men and public life of the country ; that, in fact, from the ranks of no other profession are so many called to fill high positions of trust and to perform duties, the efficient and upright discharge of which is of vital importance to the community.

In reorganizing the Faculty, under the W. C. McDonald endowment, a number of well-known names have been added to the staff, as shown above, and the courses largely specialized. It was felt, that while professional men, engaged in the active practice of their profession, might be relied upon to deliver regularly a limited number of lectures, on special subjects, they could not be expected to undertake to submit to the serious interference with their business and inevitable interruptions, involved in very lengthy courses. And to obviate the difficulties and drawbacks necessarily arising from sole dependence, as heretofore, on professional men in active practice, for attending to the interests and maintaining the efficiency of the Faculty, and to meet a deeply-felt want in this respect, the Dean has been appointed as a salaried officer, whose duty it will be primarily to devote his whole time to the work.

Further, the Professor of Legal Bibliography has been appointed secretary and librarian, and will have supervision of the Library,—comprising at present the law libraries of the late Mr. Griffin, Q.C., of the late Chancellor Day, and of part of the library of the late Mr. Justice McKay, all of which were bequeathed to the University ; and also of the law library of the late Mr. Justice Torrance, now the property of the Fraser Institute, of which he was a trustee—the use of which has been generously granted to the Faculty by the present trustees. The above law books will of themselves afford to the law student a library which will generally prove sufficient for his wants, and which will be kept up and added to by the expenditure of a sum annually in the purchase of books. There will also be provided in connection therewith a reading room, in which the leading law magazines and literature of the day will be found.

As a place for the study of Law by professional Students, Montreal affords undoubted advantages, among other reasons, on account

of the great variety and extent of the legal business done there, the constant sitting of all the principal courts of the Province, and the large number of first-class law offices open to Students; while for all students, and especially for students of historic and philosophic jurisprudence, no more interesting or attractive legal system exists than that prevailing in this Province, where may be daily seen and studied, not simply theoretically, but in active operation as parts of our law, the three famous systems of jurisprudence,—Roman, French and English,—with additions and modifications introduced by our own legislatures and courts. The imposing features of the Roman Law may be recognized throughout the greater portion of our Civil Code, often combined with or incorporated into that noble system elaborated and perfected by Pothier and other great French Jurists, both of the ancient and modern epochs, which is the direct source of most of our Civil Law; while nearly the whole body of English Criminal and Constitutional Law and large portions of English Commercial Law are equally parts of the law of this Province.

The importance of the Notarial profession, and of a knowledge of notarial practice and conveyancing, has led to the appointment as a full member of the Faculty of a Professor of Notarial Law, whose course of lectures will be attended by all professional Students.

With a view to extending as far as possible the usefulness of the Faculty, the courses of lectures on commercial subjects have been so arranged, that young men engaged in banks or other business houses can attend them without interference with their regular duties. Students of other departments of the University, and, in fact, all who may desire to do so, may attend such particular courses as they may see fit to select. It is hoped that the courses delivered will be found beneficial to all students, indeed to all who may desire to know something of the constitution and laws by which they are governed, and of a science which has been characterized by Burke, as "the collected reason of ages, combining the principles of original justice and the infinite variety of human concerns."

The classes in Law will begin in the Faculty Rooms, Fraser Institute, on MONDAY, THE 7TH SEPTEMBER, 1891.

The Supplemental and Matriculation Examinations will be held in the Faculty Rooms, Fraser Institute, on FRIDAY, 4TH SEPTEMBER, at 4 p.m.

While the Faculty accept for matriculation the requirements stated in the Regulations below, they nevertheless strongly recommend Students intending to study law to take the B.A. course in the Faculty of Arts as a preliminary qualification; and if that be not attainable, as much as possible of the Arts course.

The lectures will be delivered in the Faculty Rooms in two terms: the first beginning on Monday, 7th September, 1891, and the second beginning on Monday, 4th January, 1892.

The Examinations will be held in the William Molson Hall, McGill College building, at Christmas, and at the close of the session, and as announced below, unless otherwise determined by the Faculty.

The complete course of study in this Faculty extends over three years.

Scholarships and Prizes.

Two scholarships, each of one hundred dollars, are offered for competition to Students whose domicile is not in Montreal or vicinity. They will be awarded, after the Sessional Examinations in April, 1892, upon the results of the Examinations of the first year, and will be payable during the second year.

Prizes open to competition by all the Students will also be given to the Students taking the best standing in each year.

No scholarship or prize shall, however, be awarded to any Student unless a sufficiently high standing, in the estimation of the Faculty, be attained, to merit it.

Classification of Students.

Matriculated Students who do not take the whole course are classed as Partial Students, and are not entitled to proceed to the Degree of B.C.L.

Occasional Students will be received without matriculation for attendance on any particular series of Lectures.

Students who have completed their course of three years, and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY FOR 1891-92.

Roman Law :

1st Year.	
History of Roman Law	THE DEAN.
Maine, Ancient Law	
Institutes of Justinian	
Gaius, Commentaries	
2nd and 3rd Years.	
Institutes of Justinian	
Gaius, Commentaries	
Maine, Ancient Law	
Criminal Law	THE DEAN.
Constitutional Law	

Law of Real Estate :

History and nature of various kinds of tenure of real property in the Province, and their incidents	Professor WURTELE.

Commercial Law :

Insurance, Fire, Life and Marine	Professor ARCHIBALD.

Commercial Law :

Insurance, Fire Life and Marine	Professor DAVIDSON.
Law of Contracts	Professor GEOFFRION.

Legal Bibliography and History :

Sources of our Law : Imperial Statutes and English laws in force here ; Legislation within the province, classification of authorities French and English	Professor McGOUN.

Civil Procedure :

Jurisdiction of the civil courts	Professor FORTIN.
General Rules of Pleading	
Code of Procedure	

Notarial Law :

Notarial Practice and Conveyancing	Professor MARLER.

Civil Law :

Law of Successions	Professor DOHERTY.
Forced licitations	

Commercial Law :

Law of Banking	Professor ABBOTT.
Documents of Title	

Civil Law :

Marriage Coverants	Professor LAFLEUR.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student may apply to the Secretary, Prof. McGoun, 181 St. James St., for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course.

2. The degree of B.A. obtained from any Canadian or other British University; or a certificate of having passed the examination before the Bar for admission to study Law in the Province of Quebec; or the intermediate Examination in the Faculty of Arts in McGill University, shall be accepted in lieu of Examination for Matriculation in this Faculty. For other candidates the Matriculation Examination this year will be in the following subjects:—

Latin.—Virgil, Æneid, Book I.; Cicero, Orations I. and II. against Catiline. Latin Grammar.

French.—De Fivas' "Grammaire des Grammaires;" *Molière, "Le Bourgeois Gentilhomme;" †Translation into French of Macaulay's Essay on Frederick the Great.

Exercises in Composition and Grammatical Analysis, in English and French.

Mathematics.—Arithmetic; Algebra to the end of Simple Equations; Euclid, Books I., II., III.

History.—White's Outline of Universal History (or any equivalent manual); *Green's Short History of the English People; Miles' School History of Canada; † Duruy, Histoire de France.

Literature.—*Collier's Biographical History of English Literature; † Laharpe, Cours de Littérature; † Lefranc, Cours de Littérature.

Rhetoric—Whately's Rhetoric; Blair's Lectures (small edition).

Philosophy.—*Whately's Logic; † Logique de Port Royal; † Cousin, Histoire de la Philosophie; *Stewart's Outline of Moral Philosophy.

N.B.—The works mentioned above preceded by an asterisk are for English Students only. Those preceded by a cross are for French Students only. The remainder are for both English and French.

3. Students in Law shall be known as of the First, Second and Third Years, and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year, and those only, unless by special permission of the Faculty.

4. The register of Matriculation shall be closed on the 1st November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special

examination to be determined by the Faculty ; and, if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket or tickets for the class or classes they desire to attend.

6. Students who have attended collegiate courses of legal study in other Universities, for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7. All Students shall be subject to the following regulations for attendance and conduct :

(1) A class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted, and the said class-book shall be submitted to the Faculty at each monthly meeting ; and the Faculty shall after examination of such class-book, decide which Students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required of each Student. Professors will note the attendance immediately on the commencement of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the Student or report to the Faculty, as he may decide. While in the building, or going to and from it, Students are expected to conduct themselves in the same orderly manner as in the Class rooms. Any Professor observing improper conduct in the Class rooms, or elsewhere in the building, will admonish the Student, and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honors, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

(5) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty,

or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

8. The College year shall be divided into two terms, the first extending to the Christmas vacation, and the second from the expiration of the Christmas vacation to the end of April following.

The lectures will be delivered between the hours of half-past eight and half-past nine in the morning and four and half-past six in the afternoon; and special lectures in the evening; the whole at such hours and in such order as shall be determined by the Faculty. Professors shall have the right to substitute an examination for any such lecture.

9. At the end of each term there shall be a general examination of all the classes, under the superintendence of the Professors, and of such other examiners as may be appointed by the Corporation; which examination shall be conducted by means of printed questions, answered by the Students in writing in the presence of the Examiners. The result shall be reported as early as possible to the Faculty.

After the examinations at the close of the second term, the Faculty shall decide the general standing of the Students, taking into consideration the examinations of both terms, both of which examinations shall be considered the Sessional or Final Examinations for the college year, as the case may be.

10. No Student shall be considered as having kept a Session unless he shall have attended regularly all the courses of Lectures, and shall have passed the Sessional Examinations to the satisfaction of the Faculty in all the classes of his year.

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course or Courses of Lectures, but no distinction shall in consequence be made between the Examinations of such Students and those of the Students regularly attending Lectures. No Student shall pass the degree of B.C.L. unless he has prepared a Thesis, either in French or English, which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each Student shall, on or before the first day of March, forward such Thesis to the Secretary of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope, bearing the same *nom de plume* on it, and containing inside his name and the subject of his Thesis, and the envelope shall be opened in presence of the Faculty after the final decision shall be given on the respective merits of the several Theses.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be

awarded to the Student who being of the Graduating Class, having passed the Final Examinations, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the Medal, which examination shall include the subject of Roman Law.

14. Every Candidate, before receiving the Degree of B.C.L., shall make the following declaration :—

Ego A. B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The fees in the Faculty are as follows :—

Registration Fee	$ 5 00
Sessional Fee by Ordinary Students	36 00
Graduation Fee, including registration as voter in election of fellows	12 50
Fee for supplemental examination	5 00
Sessional Fee by Occasional or Partial Students, for each course	3 00
For Occasional or Partial students who are students in other departments of the University or affiliated Colleges, taking two or more courses, a single fee of	5 00

Matriculation and Sessional Fees must be paid on or before Nov. 1st ; and if not so paid, the name of the Student shall be removed from the books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3. Students already on the books of the University shall not be required to pay any Matriculation Fee.

16. Occasional or Partial Students may be admitted into any class on such terms as shall be arranged by the Faculty.

17. The requirements and conditions for obtaining the Degree of D.C.L. in course can be ascertained upon application to the Secretary of the Faculty.

SYLLABUS.

Friday, 4th September, 1891. Matriculation and Supplemental Examinations.

Monday, 7th. Ordinary Lectures begin.

Saturday, 12th December. Last day for notice to be sent to Secretary of Section of the Bar by candidates at the January Examination for admission to study or to practice Law in the Province of Quebec.

Monday, 4th January, 1892. Lectures, Second Term, begin.

Wednesday, 13th January, 1892. Bar Examinations take place at Montreal.

Tuesday, 1st March. Theses for Degree of B.C.L.

Monday, 25th April. Declaration of results of Examination.

Friday, April 29th—Convocation for Degrees in Law.

Monday, 6th June. Last day for notice to be sent to Secretary of Section of the Bar by candidates at the July Examination for admission to study or to practice Law in the Province of Quebec.

Wednesday, 6th July, 1892. Bar Examinations take place at Quebec.

EXAMINATIONS.

The dates of Examinations, subject to be changed if need be, by the Faculty.

Before Christmas :—

Friday, 4th September, 1891, 4 to 6 p.m. Matriculation and Supplemental Examinations—Faculty Rooms, Fraser Institute.
Saturday, 28th November, 1891, 3 to 5 p.m. On Preliminary Course on Obligations —The Dean.
Tuesday, 15th December, 1891, 4 to 6 p.m. On Legal History and Bibliography —Prof. McGoun.
Wednesday, 16th December, 1891, 4 to 6 p.m. On Civil Procedure—Prof. Fortin.
Thursday, 17th December, 1891, 4 to 6 p.m. On Roman Law—The Dean.
Friday, 18th December, 1891, 4 to 6 p.m. On Contracts—Prof. Geoffrion.
Saturday, 19th December, 1891, 3 to 5 p.m. On Agency and Partnership—Prof. Davidson.

After Christmas :—

Saturday, 13th February, 1892, 3 to 5 p.m. Real Estate—Prof. Wurtele.
Saturday, 27th February, 1892, 3 to 5 p.m. Criminal Law—The Dean.
Saturday, 19th March, 1892, 3 to 5 p.m. On Civil Law (Marriage Covenants)—Prof. Lafleur.
Tuesday, 19th April, 1892, 4 to 6 p.m. On Constitutional Law—The Dean.
Wednesday, 20th April, 1892. 4 to 6 p.m. On Civil Law (Successions)—Prof. Doherty.
Thursday, 21st April, 1892, 4 to 6 p.m. On Commercial Law—Prof. Archibald.
Friday, 22nd April, 1892, 4 to 6 p.m. On Banking and Documents of Title—Prof. Abbott.
Saturday, 23rd April, 1892, 3 to 5 p.m. On Notarial Law—Prof. Marler.

MEETINGS OF FACULTY.

Friday, 4th September, 1891, 8 p.m. Faculty Rooms, Fraser Institute.
Monday, 7th " " "
" 5th October " "
" 9th November " "
" 14th December " "
" 11th January 1892 "
" 8th February " "
" 7th March " "
" 11th April " "
" 25th " " "
" 6th June " "

FACULTY OF LAW—TIME TABLE, 1891-92.

I. MONDAY, 7th September, to FRIDAY, 2nd October, 4 weeks.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8.30 to 9.30 a.m.	Prof. McGoun.		Prof. McGoun.		
4 to 5 p.m.	Prof Fortin.	Prof. Fortin.	Prof. Fortin.	Prof. Fortin.	Prof. Fortin.
5 to 6 p.m.	The Dean.	The Dean.	The Dean.	The Dean.	The Dean.
II. MONDAY, 5th October, to FRIDAY, 6th November, 5 weeks.					
8.30 to 9.30 a.m.	Prof. McGoun.		Prof. McGoun.		
4 to 5 p.m.	The Dean.	Prof. Fortin.	The Dean.	Prof. Fortin.	The Dean.
5 to 6 p.m.	Prof. Davidson.	Prof. Geoffrion.	Prof. Davidson.	Prof. Geoffrion.	Prof. Davidson.
III. MONDAY, 9th November, to FRIDAY, 11th December, 5 weeks.					
4 to 5 p.m.	Prof. Fortin.	The Dean.	Prof. Fortin.	The Dean.	Prof. Fortin.
5 to 6 p.m.	Prof. McGoun.	Prof. Davidson.	Prof. McGoun.	Prof. Davidson.	The Dean.
IV. MONDAY, 4th January, to FRIDAY, 5th February, 5 weeks.					
8.30 to 9.30 a.m		Prof. Doherty.		Prof. Doherty.	
4 to 5 p.m.	The Dean.		The Dean.		The Dean.
5 to 6 p.m.	Prof. Lafleur.	Prof. Wurtele.	Prof. Lafleur.	Prof. Wurtele.	Prof. Lafleur.
V. MONDAY, 8th February, to FRIDAY, 11th March, 5 weeks.					
8.30 to 9.30 a.m.		Prof. Doherty.		Prof. Doherty.	
4 to 5 p.m.	The Dean.	Prof. Archibald.	The Dean.	Prof. Archibald.	The Dean.
5 to 6 p.m.	Prof. Abbott.	Prof. Lafleur.	Prof. Abbott.	Prof. Lafleur.	Prof. Abbott.
VI. MONDAY, 14th March, to FRIDAY, 15th April, 5 weeks.					
8.30 to 9.30 a.m.		Prof. Doherty.		Prof. Doherty.	
4 to 5 p.m.	Prof. Archibald.	The Dean.	Prof. Archibald.	The Dean.	Prof. Archibald.
5 to 6 p.m.	Prof. Marler.	Prof. Abbott.	Prof. Marler.	Prof. Abbott.	The Dean.

Examination by the Dean on part of his course on Saturday, 28th Nov., and Saturday, 27th February. Exam. by Prof. Wurtele, Saturday, 13th February. Exam. by Prof. Lafleur, Saturday, 19th March. Christmas Examinations, 14th to 18th Dec. Final Examinations, April 18th to 22nd.

Faculty of Comparative Medicine and Veterinary Science.

THE PRINCIPAL (Ex-officio).

Professors :

MCEACHRAN (D.), BAKER, MCEACHRAN (C).

Associate Professors :

GIRDWOOD, PENHALLOW,
WILKINS, MILLS.
STEWART.

Dean of the Faculty :—D. MCEACHRAN, D.V.S.
Secretary :—C. MCEACHRAN, D.V.S.

The Third Session of the Faculty (being the twenty-sixth of the Montreal Veterinary College) will be opened on Thursday, the 1st October, 1891, by an introductory lecture, at 8 p.m., in the lecture-room of the Faculty, No. 6 Union Avenue. The regular course of lectures will begin on Friday, 2nd October, at the hours named in the time-table, and will continue till the end of March.

The Montreal Veterinary College was inaugurated in 1866. A course of lectures on Veterinary Science was delivered during the winter, in connection with the Medical Faculty, in a lecture-room on Cotté street. The suggestion being made by the late Major Campbell, who was president of the Board of Agriculture, was warmly supported by the late Dean, Dr. George Campbell, the Principal, Sir William Dawson, and the Professors of the Institutes of Medicine, Chemistry and Botany, who became directly interested in the progress of the school.

In 1875 the growth of the school was such as to necessitate a special establishment, and the present buildings were erected at the expense of the Principal, D. McEachran, F.R.C.V.S.

During the past year considerable improvements have been made.

The complete course of study in this Faculty extends over three years. Graduates of recognized Medical Colleges are allowed to present themselves for examination after regular attendance on one full course; graduates of recognized Agricultural Colleges, where Veterinary Science constitutes a branch of study, after regular attendance for two full courses.

Allowances will be made to Students of Human or Comparative Medicine, or others who can produce certified class tickets for attendance on any of the subjects embraced in the curriculum from any recognized college or university.

Graduates and Students who avail themselves of the above privileges will nevertheless be required to pass an examination in the subjects comprised in the three years' course, unless, from satisfactory evidence otherwise produced, the examiners consider it to be unnecessary.

Graduates of recognized Veterinary Colleges, desirous of taking the degree, may do so by attendance on the final subjects for one full session, but will be required to pass the examinations on all the subjects embraced in the curriculum, botany excepted.

Occasional and Agricultural Students will be received without matriculation for attendance on any particular series of lectures. Such Students will not be examined, nor will they be entitled to receive class certificates, except as Occasional Students, nor will such attendance be accepted, should the Student subsequently wish to become a regular Student of the Faculty.

MATRICULATION.

Every Student, previous to his admission, must produce a certificate of educational acquirements satisfactory to the Faculty, or submit himself to a matriculation in writing, reading aloud, dictation, arithmetic (including vulgar fractions), English grammar (as a text-book, Miller's Swinton's Language Lessons). It will be seen that this examination is far from severe; yet it affords a certain guarantee that illiterate men will not be admitted.

A. N. Shewan, M.A., will hold the matriculation examination on Wednesday, 30th September, at 9 o'clock, at the College, 6 Union Avenue, when all those intending to enter the course should present themselves for examination

Candidates possessing certificates of education or of previous matriculation should produce them for the inspection and approval of the examiner. Graduates of any Faculty in a recognized University or Agricultural College are not required to matriculate.

No College is recognized unless its Students are required to matriculate.

REGISTRATION AND PAYMENT OF FEES.

The following are the College regulations :—

All Students desirous of attending the classes shall, at the commencement of each session, enrol their names and residences in the register of the Faculty, and procure from the Registrar a ticket of registration, for which each Student shall pay a fee of $5.

The said register shall be closed on the last day of October in each year. The fees are payable to the Registrar, and all class tickets will be issued by him, and must be paid in advance (except under special circumstances) at the time of registration.

All Students must register, including those who receive free bursaries.

Fees for the whole course are $180, which may be paid in three annual payments of $60 each, which, in all cases, must be paid on entering. Matriculation fee, $5, which is to be paid prior to the examination; $5 for registration, and $5 for re-registration, payable at the beginning of each of the following two Sessions, and $20 on receiving the diploma. Students who are allowed time for previous study will be required to pay full fees. Payments must be made in all cases as above.

STUDENTS OF THE PROVINCE OF QUEBEC.

In consideration of the annual grant, the Council of Agriculture has the privilege of sending thirteen pupils, free of expense, to the whole course ; such students must, however, pay a fee of five dollars for the course in Botany and five dollars annually for registration. These Bursaries may be obtained by young men resident in the Province of Quebec, by application made to the Dean of the Faculty, in handwriting of applicant, accompanied by a recommendation from the Agricultural Society of the district in which they reside, provided the Council considers them qualified by education and in other respects for entering the College.

In all cases, except when specially arranged, Bursars will be required to give a guarantee that they will attend three Sessions ; and failing to do so, they shall be required to pay the fees for the Sessions which they have attended.

GENERAL REGULATIONS.

Students of this Faculty will be graded as of the First, the Second, and the Final Year.

In each year Students will take the studies fixed for that year only, unless by special permission of the Faculty.

Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such, and shall obtain a ticket or tickets for the class or classes they desire to attend.

All Students shall be subject to the following regulations as regard attendance and conduct:—

A class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted; and the said class book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations; and the Faculty shall, after examination of such class-book, decide which Students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

Punctual attendance on all classes proper to his year is required of each Student. Absence or tardiness, without sufficient excuse, or inattention or disorder in the class-room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the Student, or report to the Faculty, as he may decide. While in the building, or going to or from it, Students are expected to conduct themselves in the same orderly manner as in the class-rooms. Any Professor observing improper conduct in the class-rooms or elsewhere in the building, will admonish the Student, and, if necessary, report him to the Dean.

When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honors, suspend from classes, or report to the Corporation for expulsion.

Any Student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

The College year shall be divided into two terms, the first extending to the Christmas vacation, and the second from the expiration of the Christmas vacation to the 30th March following.

Each lecture shall be of one hour's duration, but the Professors shall have the right to substitute an examination for any such lecture.

At the end of each term there shall be a general examination of all the classes, under the superintendence of the Professors, and such other examiners as may be

appointed by the Corporation. The results shall be reported as early as possible to the Faculty.

The Students have all the privileges of the McGill Medical Faculty's Laboratories, which are thus described in their annual calendar :—

PHYSIOLOGICAL LABORATORY.

The Physiological Laboratory is supplied with the most modern apparatus for the practical teaching of this most important branch of the medical curriculum. It contains, amongst other valuable instruments : kymographs, various manometers, etc., for demonstrating blood pressure ; myographs, rheocords, moist chambers, etc., and various electrical appliances for demonstrating experiments in connection with nerve and muscle ; special apparatus for illustrating various points in respiration ; apparatus specially suitable for demonstrating the processes of digestion, as well as the chemical composition and nature of the secretions, and the chief constituents of the tissues and nutritive fluids. The Laboratory is arranged in such a way as to permit of Students assisting at, and taking part in, these demonstrations. During the past session important additions of apparatus have been made to the Physiological Laboratory.

CHEMICAL LABORATORY.

The Chemical Laboratory is large, lofty, and well lighted, and can accommodate comfortably 76 men at one time. Each Student, when entering on this course, has a numbered table in the Laboratory assigned to him for his use during the session. Each table has its own gas and water fixtures, and is provided with shelves for its corresponding set of reagent bottles, as well as a drawer and locker containing a modern set of chemical apparatus specially adapted for the work. This apparatus is provided by the Professor of Chemistry, and supplied to each Student without extra charge. The Student is required to pay only for apparatus broken or destroyed.

The Laboratory is furnished with a large draught closet for ventilation, sulphuretted hydrogen apparatus, gas and combustion furnaces, etc., giving to the Student unsurpassed advantages for acquiring a sound and practical knowledge of medical chemistry.

PATHOLOGICAL LABORATORY.

In the Pathological Laboratory, accommodation will be provided for Students or practitioners who desire to carry on advanced study or private pathological research, upon their obtaining permission from the Faculty.

The Laboratory has been entirely re-built during the past session, and is well stocked with the usual apparatus for pathological and bacteriological work.

The demonstrations in Morbid Anatomy will be given in a small laboratory, specially arranged for the work.

The classes in Pathological Histology will be held in the Histological Laboratory.

HISTOLOGICAL LABORATORY.

The Histological Laboratory is a large, well-lighted room. It is so arranged that over eighty Students can be present at the microscopical demonstrations. For this purpose it is supplied with thirty-five microscopes, all from the well known makers, Zeiss, Hartnack and Leitz. From the large number of microscopes employed, Students will have special facilities in studying and making themselves thoroughly acquainted with the specimens that are the subjects of demonstration.

PRACTICAL MICROSCOPY.

This is an entirely optional course, in charge of Prof. Wilkins. It is intended especially for teaching the technique of Microscopy. Students will be shown how to examine blood, etc., fresh specimens and morbid products, also to cut, stain, and mount specimens. For this purpose they will have furnished them both normal and diseased structures, with which they will be able to secure a cabinet of at least 100 specimens, which will be of great benefit when in practice. Reagents and everything except cover-glasses and cabinet cases provided. Fee $8.

COURSES OF LECTURES.

BOTANY.

D. P. PENHALLOW.

The purpose of this course is to give Students a good grounding in the principles of General Morphology, to advance their knowledge of the Comparative Physiology of animals and plants, and enable them to determine readily such species of plants as may come under their observation. It comprises,—

1. A course of lectures on General Morphology and Classification, Histology and Physiology. The lectures are illustrated by means of the microscope, and by the models and large collections in the Peter Redpath Museum.

2. Practical work in the determination and classification of Species, for which the Botanic Garden of the University offers special facilities.

3. Studies in Canadian Botany. This work is prosecuted by means of field-excursions, which are held as often as opportunity is afforded during the autumn months.

4. A special collection of medicinal plants, now being formed at the Gardens, offers a valuable preparation in the course of Pharmacology.

ZOOLOGY.*

SIR WILLIAM DAWSON.

This course includes a systematic study of the classification of animals, illustrated by Canadian examples, and by the collections in the Peter Redpath Museum. It affords suitable preparation for collecting in any department of Canadian Zoology or Palæontology, and as an introduction to Comparative Physiology. It may be taken instead of Botany, or along with it, without any additional fee.

Students in Botany or Zoology will receive tickets to the Peter Redpath Museum, and to the Museum of the Natural History Society of Montreal.

CHEMISTRY.

GILBERT P. GIRDWOOD, M.D.

Inorganic Chemistry is fully treated; a large portion of the course is devoted to Organic Chemistry and its relations to Medicine. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. For experimental illustration, abundant apparatus is possessed by the College.

The Chemical Laboratory will be open to members of the Class, to repeat experiments performed during the course, under the superintendence of the Professor or his Assistant.

PHYSIOLOGY.

WESLEY MILLS, M.D.

The purpose of this course is to make Students thoroughly acquainted, as far as time permits, with modern Physiology: its methods, its deductions, and the basis on which the latter rest. Accordingly, a full course of lectures is given, in which both the Experimental and Chemical department of the subject receive attention.

In addition to the use of diagrams, plates, models, etc., every department of the subject is experimentally illustrated. The experiments are free from elaborate *technique*, and many of them are of a kind susceptible of ready imitation by the Student.

Laboratory work for Senior Students:—

(1) During the first part of the Session there will be a course on Physiological Chemistry, in which the Student will, under direction, investigate food-stuffs, digestive action, blood, and the more important secretions and excretions, including urine. All the apparatus and material for this course will be provided.

---

* Students may take either Botany or Zoology, but must intimate at the beginning of the session their choice, and adhere to this, except by special permission of the Faculty.

(2) The remainder of the Session will be devoted to the performance of such experiments as are unsuitable for demonstration to a large class in the lecture room, and such as require the use of elaborate methods, apparatus, etc.

HISTOLOGY.

GEO. WILKINS, M.D.

This will consist of a course of ten lectures, and twenty-five weekly demonstrations with the Microscope. As the demonstrations will be chiefly relied upon for teaching the Microscopic Anatomy of the various structures, the specimens under observation will then be minutely described. Plates and diagrams specially prepared for these lectures will be freely made use of.

COMPARATIVE PATHOLOGY.

Besides lectures and demonstrations in General Pathology and Morbid Anatomy, the Students will perform autopsies under the direction of the teacher. The experimental study of contagious and parasitic diseases will receive special attention.

MEDICINE AND SURGERY.

D. MCEACHRAN, F.R.C.V.S.

This course is intended for Students of the second and third years only.

The course embraces the principles and practice of Veterinary Medicine, including the diseases of domestic animals, their nature, causes, symptoms, and treatment. It necessarily includes Pathology and Pathological Anatomy, with daily clinical demonstrations in the hospital and yard practice of the College, as well as illustrations from plates, preserved specimens, and fresh material furnished by the Pathologist.

The course on Surgery embraces Surgical Anatomy and Practices of Surgery, and will be illustrated by a large collection of surgical appliances, about to be added to the College material for the illustration of lectures.

The large and varied practice of the College furnishes abundance of cases for demonstration purposes.

Special lectures will be given on Sanitary Science, Quarantine, inspection of meat and milk, and also on the examination of horses for soundness.

ANATOMY.

M.C. BAKER, D.V.S.

In this course the Anatomy of the horse is the subject of special study; while the structural differences of all the domestic animals are carefully explained and illustrated by fresh subjects. There is a very large collection of classic anatom-

ical models by Dr. Auzoux, of Paris, natural injections and dissections, and a most complete collection of diagrams, including Marshall's complete set, Mons. Achille Comte's Anatomical and Zoological series, also a large collection of drawings, specially prepared for the school by Mr. Scott Leighton, artist, Boston, and Mr. Hawksett, Montreal.

The Dissecting Room is open at all hours, subjects are easily procured, and either the Professor or Demonstrator will be in attendance to superintend and direct Students in practical dissection. The room is furnished with every convenience, is thoroughly lighted, and affords Students all that can be reasonably desired. Students are required to pay for material necessary for practical dissection. Before a Student can be allowed to present himself for his pass examinations, he must produce tickets certified by the Demonstrator that he has dissected two entire subjects, that is, one each session.

MATERIA MEDICA.

James Stewart, M.D.

This course comprises :—

A description of the Pharmacology and Therapeutics of the more important medicinal agents, as well as a special course on the properties, preparation, physiological and therapeutic actions of all the medicines used in Veterinary practice.

Students are also required to do practical work, in compounding and administering medicines, in the pharmacy and hospital.

CATTLE PATHOLOGY AND OBSTETRICS.

C. McEachran, D.V.S.

A special course on Cattle Diseases and Veterinary Obstetrics will be delivered, embracing the history of Cattle Plagues ; their nature, symptoms, pathological anatomy. prophylactic and therapeutic treatment ; breeding and general management of breeding animals ; diseases incident to gestation and parturition, etc.

SPECIAL COURSE ON DOGS.

Professor Wesley Mills will give a special course on Dogs, which will include :—

(1) Lectures on the psychic and physic characteristics of all the leading varieties, illustrated by specimens from his own kennels and other sources, as well as by plates, etc.

(2) The principles of training ; the feeding and general management of dogs.

(3) The principles of breeding ; the management of brood bitches and the rearing of puppies.

(4) Bench show management and the public judging of dogs.

(5) The rights and duties of dog owners.

In all of the above courses the clinical and pathological aspects of the subjects will be considered, as well as the normal.

SPECIAL COURSE ON STOCK-BREEDING.

Professor D. McEachran will during the session deliver a special course of lectures on the Breeds of Horses, Cattle, Sheep and Swine, embracing their breeding and management on farms and on the prairies. This course will also embrace inspection and transportation of animals by railroad and steamer, subjects of general information of great value to Practitioners of Comparative Medicine.

The above special courses are free to all Students.

THE MUSEUM

contains a large collection of natural and artificial specimens, consisting of skeletons of almost all the domestic animals, numerous specimens of diseased bones, preparations by Dr. Auzoux of all the different organs in the body, natural dissections, colored models, diagrams, etc., etc., all of which are used in illustrating the lectures, and to which the Students have frequent opportunities of referring. There has been recently added a large and valuable private Museum, presented to the Faculty by J. W. Gadsden, M.R.C.V.S., of Philadelphia, Penna., U.S.

THE PHARMACY.

All the medicines used in the practice of the College are compounded by the Students, under the direction of the Professors, from prescriptions for each particular case, and most of them are administered or applied by them. For this purpose they are detailed for certain pharmaceutical duties alternately. By this means they become familiar with the physical properties, compatibilities, doses and uses of the medicines, and become expert in administering them to the different patients brought for treatment.

THE PRACTICE.

The Hospital and Daily Clinics, as well as a very extensive out-door practice, including most of the largest stables in the city and numerous farms in the vicinity, afford excellent opportunities for clinical observation on horses of all breeds and ages. Owing to the numbers of cattle kept in the city, and the valuable thoroughbred herds in the neighborhood, advanced Students are enabled to see and do considerable cattle practice. The dog practice is the largest in

Canada. All canine diseases can be studied clinically, owing to the large number of dogs brought to the College for medical or surgical treatment.

Senior Students will be appointed to act alternately as dressers in the Hospital, and First and Second Year men must assist in administering medicines and at operations.

FREE CLINICS.

To afford the Students still more extensive opportunities of clinical observation, an hour a day will be given to free clinics for animals belonging to the poor, which will be duly advertised.

TEXT BOOKS.*

The following text-books are recommended :—

Anatomy.—Chauveau's Comparative Anatomy ; Strangeway's Veterinary Anatomy ; McFadeyan's Veterinary Anatomy.

Physiology —Huxley's Elementary Lessons ; Prof. Mills' Text-Book of Animal Physiology ; Outlines of Lectures, by the same author.

Histology.—Klein's Elements ; Schæfer's Essentials of Histology.

Botany.—Gray's Structural Botany ; Bessey's Botany.

Zoology.—Dawson's Handbook of Canadian Zoology.

Chemistry.— Millar ; Wurtz's Elementary Chemistry ; Armstrong.

Medicine and Surgery.—Williams' Principles and Practice of Veterinary Medicine ; Fleming's Sanitary Science and Police ; Fleming's Surgery.

Materia Medica. — Dun's Veterinary Medicines ; Walley's Veterinary Conspectus ; Tuson's Pharmacy.

Cattle Diseases.—Steel's Bovine Pathology ; Clatter's Cattle Doctor (Armitage) ; Fleming's Veterinary Obstetrics.

Canine Diseases.—Woodroof-Hill ; Mayhew.

Entozoa. —Cobbold's Entozoa of Domestic Animals.

Pathology.—Delafield and Prudden's Pathology and Morbid Anatomy.

BOARD AND TRAVELLING EXPENSES.

Board can be obtained at from $15 to $20 per month.

By the kindness of the Railway Companies, certified Students of the College will be granted return tickets from Montreal to any part of their lines, at greatly reduced rates, the said tickets to hold good from the close of one session to the beginning of the next.

Return tickets will also be granted for the Christmas vacation.

---

* Students are advised not to buy text-books extensively till after consultation with the Professor who teaches the subject.

VETERINARY MEDICAL ASSOCIATION.

This Association is for the mutual improvement of its members.

The members are Graduates and Students of Comparative Medicine, also Graduates and Students of Human Medicine.

The meetings are held fortnightly, at which papers are read and discussed, cases reported, etc.

The advantages which Students derive from these meetings are very great. Not only do they hear carefully prepared papers on subjects of professional importance, but an opportunity is afforded for practising public speaking, which in after-life is often extremely useful. The fees of the Association are expended in the purchase of books for the Library, and the prizes awarded for papers read.

The Library is owned by the Association, and is under the control of officers who are elected annually. It contains nearly 600 volumes, embracing works of great antiquity as well as the modern works on Veterinary Science and collateral subjects in both the English and French languages, all of which are available for consultation and study by members.

Every Student is expected to become a member. The entrance fee is $5, and the yearly subscription $2.50.

ASSOCIATION FOR THE STUDY OF COMPARATIVE PSYCHOLOGY.

This Society is similar in constitution to the Veterinary Medical Association.

Its object is the study of the Psychic Phenomena (intelligence, etc.) of all classes of animals, and the diffusion of sounder views on this subject.

Naturally, it is of great importance in the practice of medicine upon dumb animals, as well as of peculiar scientific interest.

QUALIFICATIONS FOR THE DEGREE.

Candidates for the Final Examination shall furnish testimonials of attendance on lectures on the following subjects:—

Either Botany or Zoology, Histology,	One course of six months, 1st year.
Chemistry, Physiology, Anatomy,	Two courses of six months, 1st and 2nd years.
Cattle Diseases and Obstetrics, Practice of Medicine and Surgery, Materia Medica,	Two courses, 2nd and 3rd years.

No one will be permitted to become a candidate for examination who shall not have attended at least one full course of lectures in this Faculty, including all the subjects embraced in the curriculum.

Courses of less length than the above will be received only for the time over which they have extended.

Students, except by special permission of the Faculty, must pursue the subjects of Anatomy, Chemistry, Histology and Botany in their first session, and are advised to take Physiology in addition.

Candidates who fail to pass in not more than two subjects of the first two years may be granted a supplemental examination at the beginning of the following session.

Supplemental examinations will not be granted, except by special permission of the Faculty, and on written application stating reasons.

Candidates who fail to pass in a subject of which two courses are required may, at the discretion of the Faculty, be required to attend a third course, and furnish a certificate of attendance thereon.

In addition to the written and oral examinations, Candidates must pass a practical clinical test, including examination of horses for soundness, written reports being required; the clinical reports to include diagnosis, prognosis and treatment.

The following oath or affirmation will be exacted from the Candidate before receiving the degree :—

DECLARATION OF GRADUATES IN COMPARATIVE MEDICINE AN D VETERINARY SCIENCE.

I,————, promise and solemnly declare that I will, with my best endeavors, be careful to maintain the interests of this University, and that, to the best of my ability, I will promote its honor and dignity.

EXAMINATIONS.

First Year.—Pass Examinations in Botany or Zoology, and Histology, and sessional examinations on other subjects in the course of the year.

Second Year.—Pass Examination in Chemistry, Physiology, Practical Histology and Anatomy, in addition to Sessional Examinations.

Third Year.—Pass Examination in Practice of Medicine and Surgery and Veterinary Obstetrics, and Diseases of Cattle and Materia Medica.

N. B.—Sessional Examinations will be held from time to time during the session, and attendance at these is compulsory, and the standing attained at the examinations will be taken into account at the pass examinations.

AGE FOR GRADUATION.

Students under seventeen will be received as apprentices, but cannot be entered as regular students before attaining that age.

Minors may pass the examinations, but cannot receive the Diploma until they are twenty-one years of age.

PAST SESSION.

The total number of Students enregistered in this Faculty during the past session was 51, of whom there were from

Quebec.....23	Massachusetts.... 7	New Hampshire... 1
Ontario..... 7	New York..... 4	Montana..... 1
Nova Scotia..... 1	Minnesota..... 1	Texas 1
Manitoba..... 1	Indiana..... 1	Arkansas..... 1
North-West Terr..... 1	Wisconsin..... 1	

HINTS TO STUDENTS.

The Matriculation Examination which you have to undergo is by no means a severe one, and if you are not prepared to pass it, you should begin at once to improve your education.

You had better not commence professional reading till you have become familiar with the fundamental subjects. Practice, except under the guidance of a thoroughly educated practitioner, is more likely to mislead than aid you.

It is advisable that you should arrive in Montreal before the opening day, so as to give you time to procure suitable lodgings. Endeavor by all means to be present at the introductory lectures on all subjects; you cannot miss one lecture without thereby losing valuable preparatory information. Come prepared to procure at once the necessary text books and note books. Make your arrangements so as to enable you to devote your entire time and undivided attention to your studies, as the three sessions which the curriculum covers will be found none too long to accomplish the necessary proficiency in the various branches of study required of you.

NOTICE TO GRADUATES.

For the purpose of increasing pathological material for the classes, Graduates are earnestly requested to send any interesting or obscure pathological specimens, which may be met with in their practice to the Pathologist at the Veterinary College, No. 6 Union Avenue. The specimens may be sent C.O.D. by express and will in all cases be acknowledged. A report upon the nature of the specimen will be sent if desired; and the specimens, when of sufficient interest, will be preserved in the Museum with the names of the donors affixed.

McGill Normal School.

The McGill Normal School in the city of Montreal is established chiefly for the purpose of training teachers for the Protestant population, or for all religious denominations of the Province of Quebec other than the Roman Catholic. The studies in this school are carried on chiefly in English, but French is also taught.

Government of the School.

The Corporation of McGill University is associated with the Superintendent of Public Instruction in the direction of the McGill Normal School, under the regulations of the Protestant Committee of the Council of Public Instruction, and it is authorized to appoint a standing committee consisting of five members, called "The Normal School Committee," which shall have the general supervision of the affairs of the Normal School. The following members of the Corporation of the University constitute the Committee of the Normal School for the Session of 1891-92.

NORMAL SCHOOL COMMITTEE.

Sir Wm. Dawson, C.M.G., LL.D., F.R.S., Vice-Chancellor of the University, *Chairman.*

Mr. Samuel Finley, } Governors of McGill College.
Mr. George Hague, }

Rev. George Cornish, LL.D., } Fellows of McGill University.
J. R. Dougall, M.A., }

J. W. Brakenridge, B.C.L., *Acting Secretary.*

OFFICERS OF INSTRUCTION.

McGill Normal School.

Sampson Paul Robins, M.A., LL.D., *Principal and Ordinary Professor of Mathematics, and Lecturer on Art of Teaching and Natural Science.*

George W. Parmelee, B.A., *Ordinary Professor of English Language and Literature, and Instructor in Classics.*

Madame Sophie Cornu, *Professor of French.*

Mr. R. J. Fowler, *Instructor in Music.*

Mr. Jno. P. Stephen, *Instructor in Elocution.*

Miss Green, *Instructor in Drawing.*

Lilian B. Robins, B.A., *Assistant to the Principal.*

Mr. W. H. Smith, *Instructor in Tonic Sol-Fa.*

MODEL SCHOOL OF THE McGILL NORMAL SCHOOL.

———*Head Master of Boys' School.*

Miss Jane A. Swallow, *Head Mistress of Girls' School.*

Miss Lucy H. Derick, *Head Mistress of Primary School.*

ANNOUNCEMENT FOR THE SESSION 1891-92.

This Institution is intended to give a thorough training to teachers, by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The thirty-sixth session of this school will commence on the first of September, 1891, and close on the thirty-first of May, 1892. The complete course of study extends over four years, and the Students are graded as follows:—

1.—*Elementary School Class.*—Studying for the Elementary School Diploma.

2.—*Model School Class.*—Studying for the Model School Diploma.

3.—*Academy Class.*—Studying for the Academy Diploma.

All the following regulations and privileges apply to male and female students alike.

I. TERMS OF ADMISSION.

(Extracted from the Regulations of the Protestant Committee of the Council of Public Instruction.)

Any British subject who produces a certificate of good moral character from the minister of the congregation to which he belongs, and evidence to show that he has completed the sixteenth year of his age, may be admitted to examination for entrance into the Elementary School Class, or, if he has completed his seventeenth year, to the entrance examinations of the Model School Class. (*See Note a.*)

Previous to admission to the Elementary School Class, every pupil-teacher shall undergo an examination as to his sufficient knowledge of reading, writing, the rudiments of grammar in his own language, geography, and arithmetic; before admission to the Model School Class he must give proof of his knowledge of the subjects of the previous year. Except as stated below, the examination shall take place before the Principal, or before such other person as he may specially appoint for the purpose. (*See Note b.*)

All candidates who present certificates of having passed in Grade III. Model School Course, and all holders of Elementary School diplomas, shall be exempt from examination for admission to the Elementary School Class. All candidates who have passed at the A.A. examinations, taking two-thirds of the aggregate marks, and who have passed in French, and all holders of Model School diplomas, shall be exempt from examination for admission to the Model School Class. Holders of Elementary School diplomas, desiring admission to the Model School Class, shall be examined in Algebra, Geometry, and French only.

Candidates shall be admitted to examination for entrance only at the times regularly appointed by the Principal of the school at the beginning of the session. Candidates exempt from examination can only be admitted during the first week of the session, except that teachers who may be actually engaged in teaching at the commencement of the session may, at the discretion of the Principal, be admitted to the Elementary School Class not later than the close of the Christmas vacation. No teacher in-training admitted later

than the first of October shall share in that part of the bursary fund which is distributed at Christmas.

In exceptional cases the Principal of the Normal School may admit on trial to the classes persons whose qualifications may be insufficient for entrance. Such persons may be excluded from the school by the Principal whenever he may judge it best so to do; but none shall be permitted to enter or to remain on trial after the semi-sessional examinations.

No candidate is admitted to the Normal School until the provisions of the school laws respecting admission have been fulfilled. (*See Note c.*)

II. PRIVILEGES OF TEACHERS IN TRAINING.

All teachers-in-training are entitled to free tuition.

At the close of the semi-sessional examinations, the sum of $400 from the bursary fund will be divided among the forty most successful pupils who do not reside at home with parents or guardians during their attendance at the school. Similarly the sum of $800 will be divided at the close of the sessional examinations. The remainder of the bursary fund will be divided as an allowance for travelling expenses among teachers-in-training residing in the Province of Quebec, at a distance of more than ninety miles from Montreal, in a proportion determined by the excess of distance above ninety miles, it being provided that no allowance for travelling expenses shall exceed ten dollars.

All teachers-in-training who pass the semi-sessional examinations in the Normal School with 60 per cent. of the total marks, and who have not fallen below 50 per cent. in any one of the groups of subjects English, Mathematics, French, and Miscellaneous, nor in any one of the subjects required by the Syllabus of Examination prescribed for diplomas of the grade to which they aspire, shall be entitled to continue in their classes after Christmas. Except by the special permission of the Principal, none other shall be entitled to this privilege, nor to a share in the Christmas bursary.

All teachers-in-training, who attain the standards defined above at the final examinations in the Normal School, shall be entitled to diplomas of the grade of the class to which they belong, and except

with the concurrence of the Principal of the school and the professor of each subject in which there has been failure, none others shall receive diplomas or share in the bursary fund.

All holders of Elementary School diplomas obtained by reaching the standards defined above shall be entitled to admission to the Model School Class; none others, without the special permission of the Principal. Such holders of Elementary School diplomas as have taken not less than 75 per cent. of the total marks, nor less than 60 per cent. of those in any subject essential to the diploma, according to the Syllabus of Examination of the Protestant Committee of the Council of Public Instruction, shall be entitled to admission among the "selected students" mentioned in the following paragraph, but others may be so admitted by the Principal. (*See Note d.*)

III. STUDENTS FOR THE ACADEMY DIPLOMA.

1. The Normal School shall bring up selected students at the end of the Model School year to the examinations for the entrance into the first year of the Faculty of Arts of the Universities. They may be examined either at the examinations for the Associate in Arts in June, or at those for the matriculation in autumn, and shall take the full course of study in the first and second years.

2. Such students shall be enrolled in the Normal School as students of the Academy Class, and shall be under the usual pledge to teach for three years. They shall engage in the practice of teaching at such times and in such schools as may be arranged by the Principal from time to time, in consistence with their college work, and shall be under the Principal and the regulations of the Normal School.

3. On report of the colleges which such students may be attending, that they have passed creditably in the Christmas and sessional examinations respectively, they shall be entitled to bursaries, not exceeding thirty dollars per session, in aid of fees and board. Such bursaries may be paid by the Normal School Committee out of any fund available for the purpose.

4. On passing the intermediate, or equivalent, examination of the Universities, such students will be entitled to receive Academy

diplomas, in accordance with the regulations of the Protestant Committee of the Council of Public Instruction for such diplomas.

5. Such students may, with the advice of the Principal, attend classes at McGill or its affiliated colleges, or at Bishop's College, and the Normal School Committee shall make such arrangements as may be possible for free tuition at such colleges.

6. It shall be competent to the Principal of the Normal School to provide any tutorial assistance that may in his judgment be necessary for Academy students. Also, it shall be his duty in the case of optional studies to select for the students those required for the curriculum of the Normal School.

7. It shall be competent to students who have taken Academy diplomas as above to continue for two years longer at the University, or to return thereto, after teaching for a time, in order to take the degree of Bachelor of Arts; but they shall be held bound to fulfil their engagements to teach, and they shall not be entitled to bursaries. (*See Note e.*)

Holders of Model School Diplomas of the McGill Normal School, who are certified by the Principal of the Normal School to have taken 75 per cent. of the total marks at their final examinations, with not less than 60 per cent. of the marks in Mathematics, French Latin and Greek respectively, shall be admitted without further examination to the first year in Arts of the McGill University; but all such Students must make good their standing in the University at the Christmas examinations.

Teachers-in-training, who do not attain the standard defined above, must, in order to enter the University, pass the usual examination for Matriculation.

Exemption from the payment of fees in McGill College for the first year will be granted to the three holders of Model School Diplomas, not being resident in Montreal, who, of all those entering the University on the conditions stated above, have gained the highest aggregate of marks at their final examinations in the Normal School, as certified by the Principal of the Normal School.

Exemption from fees in the second year will be granted to the three students entering from the Normal School, who, with creditable standing in all their examinations at the close of the first year in Arts,

have taken the highest aggregate of marks of any Normal School Students of their year.

IV. CONDITIONS OF CONTINUANCE IN THE NORMAL SCHOOL.

Teachers-in-training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled. (*See Note c.*)

Each professor shall have the power of excluding from his lectures any Student who may be inattentive to his studies, or guilty of any minor infraction of the regulations, until the matter can be reported to the Principal.

V. ATTENDANCE ON RELIGIOUS INSTRUCTION.

Teachers-in-training will be required to state with what religious denomination they are connected; and a list of the students connected with each denomination shall be furnished to one of the ministers of such denomination resident in Montreal, with the request that he will meet weekly with that portion of the teachers-in-training, or otherwise provide for their religious instruction. Every Thursday after four o'clock will be assigned for this purpose.

In addition to punctual attendance at weekly religious instruction each student will be required to attend public worship at his own church, at least once every Sunday.

VI. BOARDING-HOUSES.

1. The teachers-in-training shall state the place of their residence, and those who cannot reside with their parents, will be permitted to live in boarding houses, but in such only as shall be specially approved of. No boarding houses having permission to board male teachers-in-training will be permitted to receive female teachers-in-training as boarders, and *vice versa*. (*See Note g.*)

2. They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

3. They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

4. A copy of the regulations shall be sent to all keepers of lodging-houses at the beginning of the session.

5. In case of lodgings being chosen by parents or guardians, a written statement of the parent or guardian shall be presented to the Principal.

6. All intended changes of lodgings shall be made known beforehand to the Principal or to one of the professors.

7. Boarding-houses shall be visited monthly by a committee of professors.

8. Special visitations shall be made in case of sickness being reported, either by professors or by ladies connected with the school; and, if necessary, medical attendance shall be procured.

9. Students and lodging house keepers are required to report, as soon as possible, all cases of serious illness, and all infractions of rules touching boarding houses.

VII. ACADEMY DIPLOMAS TO GRADUATES.

Granted under the Regulations of the Protestant Committee of the Council of Public Instruction.

Graduates in Arts from any British or Canadian University, who have passed in Latin, Greek and French in the Degree Examinations, or who have taken at least second class standing in these subjects at their Intermediate Examinations, shall be entitled to receive first class Academy diplomas, provided that they have also taken a regular course in the Art of Teaching at the McGill Normal School, or other public training institution outside the Province approved by the Protestant Committee.

Graduates who have not passed in French, as prescribed above, may, on application, be examined in that subject before the Principal of the McGill Normal School, and, if satisfactory, such examination shall be accepted in lieu of the prescribed standing in French in the University examinations.

To meet the requirements of Graduates and Undergraduates in Arts, who, not having previously taken a Normal School course, desire to receive Academy diplomas of the first class under regulation 54, provision has been made for the delivery of a course of

forty lectures on Pedagogy in the Normal School and for practice in teaching in the McGill Model School for forty half days, open to Graduates in Arts of any British or Canadian University, to Undergraduates of the third year, and, with the permission of the Faculty and the concurrence of the Principal of the Normal School, to those of the fourth year.

Undergraduates will be permitted to teach the forty half days referred to above, at times extending over the sessions of the Model School, corresponding to the third and fourth years of their college course. Graduates will be permitted to teach in the Model Schools at such times as may be agreed on with the Principal.

All persons taking this course of study in the Normal School shall be held to be subject to the regulations of the said school, and to be under the supervision of its Principal while in attendance thereat.

Graduates who have taken the above course of study in Pedagogy, and the first class Academy diploma, may be entered, if so desired by them, in the published lists of the University as holders of such diplomas.

Undergraduates who hold Model School diplomas in course from the McGill Normal School, who take at least second class standing in Latin and Greek in the Intermediate Examination of the Universities, shall be entitled to receive first class Academy diplomas.

Teachers who hold (*a*) Academy diplomas granted before the first July, 1886, or (*b*) second class Academy diplomas granted under these regulations, and who produce satisfactory proof to the Protestant Committee that they have taught successfully for at least ten years, shall, when recommended by the Committee, be entitled to receive first class Academy diplomas.

Any candidate who presents to the Principal of the McGill Normal School, (*a*) the requisite certificates of age and of good moral character, according to Form No. 1 (page 12), and (*b*) satisfactory certificates that he has complied with either of the foregoing regulations, shall be recommended by him to the Superintendent of Public Instruction for an Academy diploma of the class to which he is entitled under these regulations.

FORM OF CERTIFICATE OF CHARACTER TO BE SUBMITTED BY CANDIDATES FOR ACADEMY DIPLOMAS.

"This is to certify that I, the undersigned, have personally known and had opportunity of observing ..... for the ..... last past, that during all such time *his* life and conduct have been without reproach; and I affirm that I believe *him* to be an upright, conscientious, and strictly sober *man*."

This Certificate must be signed by the Minister of the Congregation to which the Candidate belongs, and by two School Commissioners, or Trustees, or Visitors.

VIII. NOTES ON THE PRECEDING REGULATIONS.

Chiefly extracted from the By-Laws of the McGill Normal School.

(*a*) On application to the Principal of the School, candidates for admission will be furnished with forms of application, containing the required forms of certificate of good character and of agreement to teach for three years in some Public School in the Province of Quebec.

(*b*) Teachers-in-training admitted to the Elementary School class at the beginning of a session must be able to parse correctly a simple English sentence; to write a neat dictation from any school reader, with no more than five per cent. of mistakes in spelling, in the use of capitals, and in the division of words into syllables; to give the names and state the positions of the continents, of the oceans, of the greater islands, peninsulas, capes, mountains, gulfs, bays, straits, lakes, and rivers, and of the chief political divisions and most important cities of the world; and to work correctly examples in the simple rules of arithmetic and in fractions.

(*c*) Teachers-in-training are expected to give their whole time and attention to the work of the school, and are not permitted to engage in any other course of study or business during the session of the school.

There shall be no intercourse between male and female teachers-in-training while in school, or when going to or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Teachers-in-training who leave the Normal School in the middle of a session are expected to assign to the Principal satisfactory reasons, accompanied, in case of failure of health, by medical certificates.

(*d*) The J. C. Wilson prize of forty dollars and a book, annually chosen by the donor, shall be given to that teacher-in-training of the Elementary School class who passes for a diploma, and takes the highest aggregate of marks at the final examination of the year.

The Prince of Wales' medal and prize shall be given to that teacher-in-training

of the Model School class who passes for the diploma, and takes the highest aggregate of marks at the final examination of the year.

The Lord Stanley silver medal shall be given to that teacher-in-training of the Academy class, who at the University Intermediate Examinations has passed for a diploma with the highest aggregate of marks. If in any year there are teachers-in-training in two Universities, the Principal of the Normal School, in view of the examinations set, and of the number of marks reported for each examination, shall determine to whom this medal shall be awarded.

(*e*) In order to be recognized as teachers-in-training for the Academy diploma, students who have fulfilled the conditions stated in the regulations of the Protestant Committee of the Council of Public Instruction must apply at the beginning of each collegiate year to the Principal of the Normal School for enrolment, and for certificates of enrolment to be presented to the Dean of the Faculty of Arts. Having entered college, they must report to the Principal of the Normal School from time to time, as he may require, and must furnish him with certificates of having successfully passed their several examinations, without which certificates, signed by the Dean of the Faculty or his representative, no bursaries shall be paid.

(*f*) The date of the examination of graduates in Arts for Academy diplomas shall be the 20th day of May, or the school day next succeeding that date; the hours shall be from 10 a.m. to 12 noon.

(*g*) No boarding house is attached to the institution, but every care will be taken to ensure the comfort and good conduct of the Students in private boarding houses approved by the Principal, who will furnish lists to applicants for admission. Board can be obtained at from $12 to $16 per month.

IX. COURSE OF STUDY.

N.B.—The subjoined Course of Study has been designed, and all instruction in it is given, with express reference to the work of teaching.

1. ELEMENTARY SCHOOL CLASS, STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating teachers actually in charge of schools at the commencement of the Session, and whose previous education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows:—

FIRST TERM, from September 1st to December 3rd.

(*Entrance Examination as stated above.*)

English.—The structure of sentences. Orthography and orthoepy. Penmanship. The study of Milton's L'Allegro and Il Penseroso.

Geography.—General view of continents and oceans. Map of North America with special reference to the Dominion. Eléments de Géographie moderne.

History.—Outline of general and sacred history. Histoire de France, en français.

Arithmetic.—Simple and compound rules.

Algebra.—The elementary rules.

Geometry.—Elementary Notions.

French.—Darey's Principes de Grammaire Française to page 50, with verbs of first conjugation. Méthode naturelle.

Botany.—High School Botany, Spotten.

Chemistry.—Lectures.

Reading and Elocution.

Drawing.—Elements, simple outlines and map drawing.

Music.—Vocal music with part songs. Junior Certificate of Tonic Sol-Fa College.

Art of Teaching.—Lectures on the principles of education specially on those derived from the mental and moral nature of the child.

SECOND TERM, January 6th to end of Session.

(*No pupils will be received after the commencement of this term. Those who enter must pass the examination of the class in the work detailed above.*)

English.—Structure of words and sentences. Etymology, derivation and syntax. Study of Macaulay's Essay on Milton, and of Goldsmith's Deserted Village.

Geography.—Contour, elevations, river systems, political divisions and chief cities of South America and of the Old World, with special reference to the British Islands.

History.—England. Histoire de France, continuée.

Arithmetic.—Fractions, Decimals, Proportion, Interest, Properties of numbers, Mensuration.

Book-keeping.—Single Entry.

Algebra.—Simple equations of one unknown quantity with problems.

Geometry.—First book of Euclid, with deductions.

Art of Teaching.—Lectures continued.

French.—Principes de Grammaire Française, page 100, with verbs regular and irregular. Méthode naturelle.

Botany.—High School Botany, Spotten.

Physiology and Hygiene.—Lectures.

Reading and Elocution.

Drawing.—Freehand drawing from the solid, and elements of perspective.

Music.—Elements of vocal music and part songs. Elementary Certificate of Tonic Sol-Fa College.

Practice in Teaching in the McGill Model Schools, as directed by the Principal.

Religous Instruction will be given throughout the Session.

In addition to the text-books named above, each Student of the Elementary School Class must be provided with an English Grammar, an English History, an Atlas of recent date, an Arithmetic, an Algebra, and a Euclid.

2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

Students entering the school in this second year must have passed a satisfactory examination in the subjects of the Elementary School Class. The Class will pursue its studies throughout the Session, without division into terms.

English.—Principles of grammar and composition. Style. History of the English language. Study of Shakespeare's Tempest, Scott's Lady of the Lake, Tennyson's Lotus Eaters.

Geography.—Mathematical and physical. Use of the globes.

History.—Rome, Canada.

Art of Teaching.—Lectures on the principles of education, especially on those derived from the mental and moral nature of the child.

Arithmetic.—Commercial arithmetic. Logarithms.

Book-keeping.—Double entry.

Algebra.—Equations of more than one unknown quantity, and quadratics.

Geometry.—Second, third and fourth books of Euclid, with application to mensuration.

Object Lessons.

Latin.—Grammar, Cæsar, Gallic War, Book I.; Æneid, Book I, vv. 300.

Greek.—Grammar, Anabasis, Book I.

French.—Translation from French into English, and from English into French, Darey's Principes de Grammaire, Eléments de Littérature française Lectures Françaises, Méthode Berlitz, Canadian History, l'Histoire du Canada par Miles, French Geography.

Agricultural Science.—Principles, especially chemical and botanical, and application to Canadian agriculture.

Elocution.

Drawing.—Elements of perspective, drawing from the cast and map drawing.

Music.—Instrumental music, part songs, and rudiments of harmony. Intermediate Certificate of Tonic Sol-Fa College.

Practice in Teaching.—In the McGill Model Schools, as directed by the Principal.

Religious Instruction throughout the Session.

Such Students as, from their conspicuous ability and preparation, may be selected to enter the Academy Class of the Normal School, will, in addition to the work given above, read Xenophon, Anabasis, Book I., and Virgil, Æneid, Book I., with special attention to Greek and Latin Grammar.

Other Students of exceptional ability may, with the consent of the Principal and the Professors of the several subjects, choose one of the following courses of extra study :—

(*a*) Mathematics : trigonometry and mechanics.

(*b*) French : classiques français, composition, et grammaire.

(*c*) Drawing : water-color.

(*d*) Music : violin.

In addition to the text-books named above, each Student of the Model School Class must be provided with an English Grammar, a History of Canada, a History of Rome, an Arithmetic, an Algebra, a Euclid, and Dawson's Scientific Agriculture.

3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA.

Will follow two years the course of McGill University and its affiliated colleges, or that of Bishop's College, Lennoxville, being enrolled on the books of the Normal School, and, if residents of the country, receiving a bursary from the Normal School not exceeding $30 per annum, and such tutorial assistance as may be deemed necessary. Such Students must take in their courses such options only as are approved by the Principal of the Normal School.

The course for the current year in McGill College, for first year Students, is :—

Greek.—Homer.—Iliad, Book XXII. Xenophon. Cyropaedeia, Book I. Studies in History and Literature.

Latin.—Cicero, Select Orations. Virgil. Æneid, Bk. X.—Translation at sight. Studies in History and Literature. Latin Prose Composition.

Mathematics.—Arithmetic. Euclid, six books. Algebra to end of Quadratic Equations. Plane Trigonometry, in part.

English Language and Literature.—First term. Milton's Comus and Bacon's Essays (selected). Two lectures a week. English Composition, one lecture a week.

Second term.—English Literature, previous to Elizabethan Period.

Chemistry.—Lectures, chiefly on Elementary and Inorganic Chemistry, with Experiments in the Class-Room, and Laboratory work, if desired ; the whole preparatory to the course in Natural Science.

French.—Darey, Principes de Grammaire française. LaFontaine, Choix de Fables. Molière, L'Avare. Dictation ; Colloquial exercises.

The course for second year Students is :—

Greek.—Plato. Apology. Xenophon. Memorabilia. Bk. I., Chaps. I. to IV. History of Greece.

Latin.—Horace. Epistles, Bk. I., 1, 2 and 6; Livy, Bk. XXI. Translation at sight, and Latin Prose Composition.

Mathematics.—Arithmetic, Euclid, Algebra and Trigonometry as before. Logarithms. Plane Trigonometry, including solution of triangles and applications.

Mathematical Physics.—Mechanics, one lecture a week.

English Literature.—A period of English Literature and one play of Shakspere. During the session of 1891-92 : The leading poets of the nineteenth century. Shakspere, A Midsummer Night's Dream. [Clarendon Press Edition.]

Psychology and Logic.—First Term, Elementary Psychology (*Text-Book :* Murray's Handbook of Psychology, Book I). Second Term, Logic (*Text-Book :*—Jevons' Elementary Lessons in Logic).

Botany.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology. *Text-Books :*— Gray's Structural Botany.

French.—Ponsard, l'Honneur et l'Argent. Racine, Esther. Contanseau Précis de Littérature Française depuis son origine jusqu'à la fin du XVIIIe siècle. Translation into French :—Dr. Johnson, Rasselas. Dictation. Parsing. Colloquial exercises.

The course in Bishop's College for the current year is :—

Greek.—Euripides, Hecuba, Homer, Odyssey IX. and X.

Latin.—Virgil, Georgic IV.; Sallust, Jugurtha.

English.—Rhetoric and Grammatical Analysis, with a course of Lectures on English Literature.

History.—Greek and Roman.

French.—Translation, Grammar and Composition.

Mathematics.—Euclid, Books I., II., III., IV., VI. and XI. Algebra to Progressions. Arithmetic.

Physics.—Balfour Stewart's Elementary.

SYLLABUS OF LECTURES ON PEDAGOGY.

(Open to Graduates and Undergraduates.)

The Legal Position of the Teacher.

1. The organization of Public Instruction in Quebec. 2. The relation of the teacher to the Department of Public Instruction and to the Protestant Committee of the Council of Public Instruction. 3. The relation of the teacher to school commissioners and parents. 4. The relation of the teacher to pupils. 5. The teacher as a member of a profession.

Discipline.

6. Discipline as a means of immediate pleasure to pupils. 7. Discipline as tending to school success. 8. Discipline as a preparation for life. 9. Discipline developing character. 10. Discipline enforced by authority.

INSTRUCTION IN SPECIAL SUBJECTS.

11. English reading, writing, grammar. 12. Literature, composition. 13. French. 14. The classics. 15. Number; arithmetic and algebra. 16. Form; geometry. Number and form; trigonometry and mensuration. 17. Geography and history. 18. Botany and chemistry. 19. Drawing and music. 20. The acquisition of general knowledge.

PHYSICAL DEVELOPMENT.

21. Health. 22. Growth. 23. The training of the eye. 24. The training of the ear. 25. The training of the hand.

MENTAL DEVELOPMENT.

26. The training of the analytic faculty. 27. Observation and experiment. 28. The training of the synthetic faculty. 29. Understanding. 30. Judgment and reason. 31. Invention. 32. Imagination. 33. Memory of sensations. 34. Memory of conceptions. 35. Verbal memory.

MORAL DEVELOPMENT.

36. Training in truthfulness. 37. In justice and purity. 38. In philanthropy and patriotism. 39. In earnestness. 40. In good manners.

MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL.

Boys' School.——, *Head Master.*

Selina Sloan,
Elizabeth Reid, } *Assistants.*

Girls' School.—Jane E. Swallow, *Head Mistress.*

Mary J. Peebles,
Louisa McNaughton, } *Assistants.*

Primary School.—Lucy H. Derick, *Head Mistress.*

Marion Taylor, *Assistant.*

These Schools can accommodate about 300 pupils, are supplied with the best furniture and apparatus, and conducted on the most modern methods of teaching. They receive pupils from the age of six and upwards, and give a thorough English education. Fees: Boys' and Girls' Model Schools, $1.00 to $1.50 per month: Primary School, 75c.; payable monthly in advance.

Passed the University Examination.

SESSION 1890-91.

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B.C.L.

Hibbard, Frederick W., B.A., Dunham, Q.
Hatchette, Francis T., Montreal.
Geoffrion, Victor, Montreal.

FACULTY OF MEDICINE.

PASSED FOR THE DEGREE OF M.D., C.M.

(Arranged Alphabetically.)

Dewar, G. F., New York, P.E I.
Du Vernet, E., Gagetown, N B.
Fleming, G. W., Chipman, N.B.
Girdlestone, G. W., Winnipeg, Man.
Goff, H. N., Newport, P.E.I.
Gunter, F. B., Fredericton, N.B.
Henderson, J. A.
Hewetson, S. W., Georgetown, Ont.
Hewetson, J., Riverside, Ont.
Holden, D. B., B.A., Montreal, Que.
Jamieson, W. H., Montreal, Que.
Keir, E. J., Malpeque, P E.I.
Kelly, C. I., West Flamborough, Ont.
Lambert, E. M., Ottawa, Ont.
Lawrence, J. W., Lower Dumfries, N.B.
Love, A., New Glasgow, N.S.
Lovering, W. T., Seattle, Wash. Terr.
Lindsay, W., St. Marys, Ont.
Livingstone, H. A., Montreal, Que.
Mader, A. I, New Canada, N.S.
Main, C. G., St Andrews, N.B.
Martin, M. Mc., Brown's Creek, P.E.I.
Martin, S. H., Savage Mines, Que.
Morrow, W. S., Halifax, N.S.
Mackay, R. B, B.A, Toronto, Ont.
Mackenzie, S. R.
McArthur, A D., Kenmore, Ont.
McCann, A. E. A., Montreal, Que.
McCrimmon, A. A., St. Thomas, Ont.
McLennan, K., Dunvegan, Ont.
McMillan, J H., Pictou, N.S.
McMillan, W., Alberry Plains, P.E I.
McMorine, R. F., Richmond, Que.
McPhail, J A., B.A., Orwell, P.E.I.
Parke, G. H., Quebec, Que.
Robertson, E. A., Lennoxville, Que.
Robertson, T. F., Brockville, Ont.
Shirriff, G. R., Huntingdon, Que.
Sinclair, O. W., Bridgetown, N.B.
Smith, C. F., West Winchester, Ont.
Smith, T. H, North Sidney, C.B.
Sparling, A. J., Pembroke, Ont.
Spier, J. R., Lindsay, Ont.
Troy, W., Valleyfield, Ont.
Tunstall, C. A., Montreal, Que.
Watson, N M., Williamston, Ont.
Webster, R. E, Brockville, Ont.
Williamson, W. P., Chatham, Ont.

PASSED THE PRIMARY EXAMINATIONS.

Aylen, E. D.
Blunt, H. V.
Bostwick, W. E.
Brown, J. A.
Cameron, J. D.
Deeks, W. E., B.A.
Dewar, A. T.
Dewar, G. F.
Du Vernet, E.
Fleming, G. W.
Girdlestone, G. W.
Goff, H. N.
Gunter, F. B.
Henderson, J. A.
Hewetson, S. W.
Holden, D B.
Jamieson, W. H.
Lawrence, J. W.
Lindsay, W.
Livingstone, H. A.
Martin, S. H.
Mackay, R. B., B.A.
Mackenzie, S. R.
McArthur, A. D.
McCann, A. E. A.
McLennan, K.
McMillan, W.
McMorine, R. F.
McPhail, J. A.
Patterson, W.
Rorke, R. F.
Semple, E J.
Seguin, J. W. A.
Scane, J. W.
Shaw, G F.
Shaw, T. P.
Smith, T. H.
Tomkins, J. E. C.
Walker, J. L.
Watson, N. M.
Wilson, R.
Wilson, R. D.

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B.A.

In Honours.

First Rank.—LeRossignol, Walter J.

Ordinary.

McGill College.

Class I.—McGregor, John M.
Gunn, William Thos.
Warne, James F.
Robins, Lilian Bertha.
Pattison, Mary L.

Class II.—Moffatt, Eva L.
MacDougall, Gordon W.
Oliver, William.
Smith, G. Louise.
Hall, Elizabeth.
McGregor, Elizabeth Bethia.
Ellenwood, William Roger.
Pidgeon, George Campbell.
Hall, Richard S. } equal.
Tees, John. } equal.
Warne, William A. } equal.
Holden, Arthur R. } equal.
Moore, Levi. } equal.
Young, Henry C.

Class III.—Cole, Arthur A. } equal.
Russell, Andrew. } equal.
Dobson, John R.
Hipp, Edmund Gregory. } equal.
Whyte, James T. } equal.

ELLIOTT, EDWARD A.
GOFF, HARRY NEVILLE.
MCCULLOUGH, ROBERT.
MCLEAY, ALFRED A.
Aegra.—MACMILLAN, HELENA.

Morrin College.

Class II.—BROWN, MARTHA L.

ADMITTED TO THE DEGREE OF LL.D. "*Honoris Causâ.*"

GEORGE MERCER DAWSON, LL.D. (Kingston), D.Sc. (Princeton); A.R.S.M., Assistant Director of the Geological Survey of Canada.

REV. MOSES HARVEY, Newfoundland.

PASSED THE INTERMEDIATE EXAMINATION.

McGill College.

Class I.—JAMES, AGNES.
GORDON, JOHN.
MANSUR, CHARLES.
BROWN, JAMES.
SMARDON, CHARLOTTE.
Class II.—MAHAFFY, ALBERT.
LEROSSIGNOL, MARY.
REAY, JANET. } equal.
WILSON, KATE, }
HICKSON, J. W. A.
FAIRCLOUGH, ELIZABETH.
JACKSON, ANNIE L.
MCIVER, E. J.
GURD, CHARLES C.
MILLAR, EDITH M.
SEYMOUR, MARTHA.
HONEYMAN, H. A.
LEE, MABEL.
SKEELS, ALBEE A.
TOWNSEND, WILLIAM MCN
DONAHUE, WILLIAM.
KILLALY, H. N.
Class III.—SMITH, EDWARD F.
BROWN, CECIL L.
HUTCHISON, DAVID.
MUIR, PETER D.
BRITTAIN, ISABEL.

INTERNOSCIA, JEROME, *s.*
MACDONALD, JESSIE H., *s.*
MCGERRIGLE, J. A., *s.*
MCVICAR, ARCHIBALD, *s.*
MCVICAR, ROBERT, *s.*
PRATT, FRANCIS, *s.*

s.—With supplemental Examination in one subject. Arranged alphabetically.

Morrin College.

Class I.—None.
Class II.—MACADAM, MARGARET.
BRODIE, ALEXANDER.
Class III.—GALE, ETHEL.
CHAMBERS, E. J.

St. Francis College.

Class I.—None.
Class II.—HEWITT, EDITH.
Class III.—PRENDERGAST, A. R.

FACULTY OF APPLIED SCIENCE.

PASSED FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

Civil Engineering *Advanced Course.*

IN ORDER OF MERIT.

ERNEST ALBERT STONE, ROBERT BICKERDIKE.

Civil Engineering (*Ordinary Course*).

IN ORDER OF MERIT.

ERNEST ALBERT STONE, ROBERT BICKERDIKE, WILLIAM JARDINE BULMAN, JOHN EDWARD SCHWITZER.

Mechanical Engineering.

IN ORDER OF MERIT.

PERCY HOWE MIDDLETON and HENRY MARTYN RAMSAY, equal; THOMAS HENRY WINGHAM, MILES LAWRENCE WILLIAMS.

Special Examination.—DUNCAN D. MCTAGGART.

Mining Engineering.

IN ORDER OF MERIT.

WILLIAM HENRY HOWARD WALKER, HUGH YELVERTON RUSSEL.

FACULTY OF VETERINARY SCIENCE.

PASSED FOR THE DEGREE OF D. V. S.

FROM PREVIOUS SESSIONS.

Paul Paquin, Bactereologist and Professor of Veterinary Science, Agricultural College, Columbia, Mo.

A. R. Rowat, Chief Veterinarian to the Government of Honolulu, S. I. Peter Cummings, Lecturer of Anatomy, Quebec Veterinary College. John Robertson, Veterinary Surgeon 2nd U. S. Cavalry.

John Ryan, Lecturer Chicago Veterinary College, Chicago, Ill., U. S.

Charles R. Simpson, Charlestown, Mass.

James B. Paige, Lecturer of Veterinary Medicine, Amherst Agricultural College, Amherst, Mass.

Archibald A. Keys, Minneapolis, Minn., U.S.

Edward C. Crevier, Peterborough, Ontario.

SESSION OF 1890-91.

SIDNEY S. TWOMBLY
JON. A. MCCRANK
DAVID ST. LOUIS
THOMAS B. MCDONALD
THOMAS C. SIMPSON
JOHN WATSON
GEORGE E. MACAULAY
A. W. GORHAM
DONALD D. MCDONALD
CHARLES M. HIGGINSON
DAVID B. COMSTOCK
GEORGE TOWNSEND
GEORGE A. MILLER

Scholarships and Exhibitions.

SESSION 1890-91.

FACULTY OF ARTS.

I. SCHOLARSHIPS (Tenable for two years).

Year of Award.	Names of Scholars.	Subject of Examination.	Annual Value.	Founder or Donor.
1889	LeRossignol, W. J.	Class.& Mod.Lang	$125	W. C. McDonald.
1889	McGregor, J. M.	Class.& Mod.Lang	120	Chas. Alexander.
1889	Gunn, W. T.	Nat. Science.	125	W. C. McDonald.
1890	Wood, Arthur B.	Mathematics.	125	W. C. McDonald.
1890	Robins, George D.	Mathematics.	125	W. C. McDonald.
1890	Cushing, Harold B.	Nat. Science.	125	W. C. McDonald.
1890	Archibald, E.	Class.& Mod.Lang	125	W. C. McDonald.
1890	Kollmyer, W. H.	Class.& Mod.Lang	120	Barbara Scott.

II. EXHIBITIONS (Tenable for one year).

NAMES OF EXHIBITIONERS.	Academic Year.	Annual Value.	Founder or Donor.
Fairclough, Elizabt.	Second	$125	W. C. McDonald.
Brown, James.	"	125	George Hague.
*Craig, W. W.	First	125	W. C. McDonald.
*Dickson, E. H. T.	"	125	W. C. McDonald.
*Graham, Angus	"	100	Major Mills.

W. C. McDonald Bursaries, value $62.50 each, were awarded to :—

MCIVOR E. J. (2nd year).

*BLACKETT JOHN (1st year).

DICKSON SYDNEY (1st year).

* The Governor-General's exemptions from Tuition Fees for four years were awarded to the Students thus indicated.

Prizes, Honours and Standing.

SESSION 1890-1891.

FACULTY OF LAW.

GRADUATING CLASS.

THIRD YEAR.

PASSED FOR THE DEGREE OF B.C.L.

Hibbard, Frederick William, B A., Dunham, Q.; Elizabeth Torrance Gold Medal and First Prize of $50.

Hatchette, Francis Joseph, Montreal; Prize for Thesis, Second Prize of $25.

Geoffrion, Victor, Montreal.

SECOND YEAR.

PASSED IN ORDER OF MERIT.

Ryan, Percy, Ottawa; First Prize of $50.

Hutcheson, Robert Bennet, Montreal; Second Prize of $25.

Truell, Harry V., B.A., Barnston, Q.

FIRST YEAR.

PASSED THE SESSIONAL EXAMINATIONS, IN ORDER OF MERIT.

Cameron, John Alexander, B.A., Huntingdon, Q.; Scholarship, value $100.

Davidson, Peers, B A., Montreal; Prize of $50.

Geoffrion, Aimé, Montreal; Prize of $25.

Hall, Alexander Rives, B.A., Cote St. Antoine.

Johnson, Alexander Ronald, B.A., Montreal.

Passed in the following subjects:—Roman Law, Criminal Law, Real Estate Law, Law of Sales, Law of Contracts, Legal History and Bibliography, Notarial Law, Civil Law (Gifts and Wills), Railway Law, Civil Law (Law of Persons).

Harwood, C. A.; Jacobs, S. W.

Passed in Roman Law, Criminal Law, Law of Real Estate, Commercial Law (Sales and Bills and Notes). Law of Contracts, Legal History and Bibliography, Civil Law (Gifts and Wills and Law of Persons) Railway Law.

Curran, F. J.

Passed in Roman Law, Criminal Law, Law of Real Estate, Commercial Law (Sales), Law of Contracts, Legal History and Bibliography, Civil Procedure, Civil Law (Gifts and Wills and Law of Persons) Railway Law.

Glass, L. J.

Passed in Roman Law, Criminal Law, Law of Real Estate, Law of Sales, Law of Contracts, Legal History and Bibliography, Notarial Law, Civil Law (Gifts and Wills) and (Law of Persons).

Maynard, Etienne.

STANDING IN THE CLASSES.

ROMAN LAW.—Professor N. W. TRENHOLME, M.A., D.C.L., Dean of the Faculty.

Third Year.—(First Paper) :—Hatchette, Hibbard, Geoffrion V.
(Second Paper) :—Hibbard, Hatchette, Geoffrion V.

Second " (First Paper) :—Truell, Ryan, Hutcheson.
(Second Paper) :—Truell, Ryan, Hutcheson.

First " Cameron, Davidson, Geoffrion A., Curran, Guerin, Hall, Harwood, Glass, Maynard, Johnson, Jacobs.

CRIMINAL LAW.—Professor N. W. TRENHOLME, M.A., D.C.L., Dean of the Faculty.

Third Year.—Hibbard and Hatchette, equal; Geoffrion V.

Second " Truell, Ryan, Hutcheson.

First " Davidson and Hall, equal; Cameron, Johnson, Jacobs, Glass, Harwood, Geoffrion A., Guerin, Curran, Maynard.

LAW OF REAL ESTATE.—Professor HON. J. S. C. WURTELE, D.C.L.

Third Year.—Hatchette, Geoffrion, Hibbard.

Second " Ryan, Hutcheson, Truell.

First " Cameron, Geoffrion A., Davidson, Harwood, Glass, Johnson, Hall, Curran, Guerin, Maynard, Jacobs.

COMMERCIAL LAW (*Sales*).—Professor JOHN S. ARCHIBALD, M.A., D.C.L., Q.C

Third Year.—Hibbard, Geoffrion V., Hatchette.

Second " Ryan, Truell, Hutcheson.

First " Geoffrion A.; Davidson and Harwood, equal; Johnson, Cameron, Curran, Hall, Glass, Guerin, Jacobs, Maynard.

COMMERCIAL LAW (*Bills, Notes and Cheques*).—Professor L. H. Davidson, M.A., D.C.L., Q.C.

Third Year.—Hibbard, Hatchette, Geoffrion V.

Second " Ryan, Hutcheson, Truell.

First " Cameron, Geoffrion, Hall, Davidson, Curran, Johnson, Ringland.

LAW OF CONTRACTS.—Professor C. A. Geoffrion, B.C.L., Q.C.

Third Year.—Hatchette; Geoffrion and Hibbard, equal.

Second " Hutcheson and Ryan, equal; Truell.

First " Davidson and Hall, equal; Cameron and Geoffrion and Howard, equal; Johnson, Curran, Maynard, Jacobs, Guerin, Glass.

LEGAL HISTORY AND BIBLIOGRAPHY.—Professor Arch. McGoun, M.A., B.C.L.

Third Year.—Hibbard, Hatchette, Geoffrion.

Second " Ryan, Hutcheson, Truell.

First " Davidson, Curran, Cameron, Hall, Johnson; Glass and Harwood and Geoffrion A., equal; Jacobs, Maynard.

CIVIL PROCEDURE.—Professor Thomas Fortin, LL.L.

Third Year.—Hibbard, Hatchette, Geoffrion V.

Second " Hutcheson, Ryan, Truell.

First " Davidson, Cameron, Geoffrion, Glass, Hall, Johnson.

NOTARIAL LAW AND PROCEDURE.—Professor W. DeM. Marler, B.A., B.C.L.

Third Year.—Hibbard, Hatchette, Geoffrion V.

Second " Hutcheson, Ryan, Truell.

First " Cameron, Hall, Geoffrion, Davidson, Harwood, Johnson, Jacobs, Maynard.

RAILWAY LAW.—Professor Harry Abbott, B.C.L., Q.C.

Third Year.—Hibbard, Hatchette, Geoffrion V.

Second " Ryan, Hutcheson, Truell.

First " Davidson, Hall, Cameron; Jacobs and Curran, equal; Glass, Geoffrion A., Johnson, Harwood.

CIVIL LAW (*Gifts and Wills*).—Professor C. J. Doherty, B.C.L., Q.C.

Third Year.—Hibbard, Hatchette, Geoffrion V.

Second " Ryan, Hutcheson, Truell.

First " Cameron and Davidson, equal; Geoffrion A., Harwood; Hall and Glass, equal; Johnson, Curran, Maynard, Jacobs, Guerin.

CIVIL LAW (*Persons*).—Professor Eugène Lafleur, B. A., B.C.L.

Third Year.—Hibbard, Geoffrion V., Hatchette.

Second " Ryan, Truell, Hutcheson.

First " Davidson, Geoffrion A.; Cameron and Harwood, equal; Curran; Glass and Maynard, equal; Guerin; Hall and Jacobs, equal; Johnson.

FACULTY OF MEDICINE.

The Holmes Gold Medal for the best Examinations in all the Branches comprised in the Medical Curriculum is awarded to W. A. Brown of Chesterville, Ont.

The Prize for the Best Examination in the Final Branches is awarded to William Fawcett Hamilton of Sackville, N.B.

The Prize for the best Examination in the Primary Branches is awarded to W.E. Deeks of Williamsburg, Ont.

The Clemesha Prize in Clinical Therapeutics is awarded to W. S. Morrow of Halifax, N. S.

The Sutherland Gold Medal is awarded to J. A. Henderson.

The following, arranged in order of merit, deserve honorable mention:—

In the Primary Branches:—Henderson J. A., MacKay R. B., Yearwood C. McLennan K., Scane J. W., Dewar A. T., Patterson W., Aylen E. D, Wilson Robt., Cameron J. D., Rorke R. F., Bostwick W. E., and MacArthur A. D.

In the final Branches:—Hattie W. H, Morrow W. S., Bowie R. A., Clemesha J. C., Hewetson J., Troy Wm., Busby J., Dewar A., Robertson E., Grafton E. A., Robertson T. F., Spier J. R., Smith C. F., Kelly C. I.

PROFESSOR'S AND DEMONSTRATOR'S PRIZES.

Botany.....A. Davidson.
Senior Anatomy.....J. A. Henderson.
Junior Anatomy.....A. A. Robertson.
Clinical Chemistry.....B. F. Boyce.
Zoology.....G. H. M. Manchester.

FACULTY OF ARTS.

GRADUATING CLASS.

B. A. Honours in Mental and Moral Philosophy.

LE ROSSIGNOL, WALTER J.—First Rank Honours and Prince of Wales Gold Medal.

Gold Medal and Special Certificates for First Rank General Standing.

MCGREGOR, JOHN M.—Special Certificate, Lord Stanley Gold Medal.

GUNN, WILLIAM T.—Special Certificate.

WARNE, JAMES F.—Special Certificate.

ROBINS, LILIAN BERTHA.—Special Certificate.

PATTISON, MARY L.—Special Certificate.

THIRD YEAR.

WOOD, ARTHUR B.—First Rank Honours and Prize in Mathematical Physics; First Rank General Standing; Prize in Classics.

KOLLMYER, W. HECTOR.—First Rank Honours and Prize in Classics; First Rank Honours and prize in Mental and Moral Philosophy; First Rank General Standing.

ARCHIBALD, EDWARD W.—First Rank Honours in Modern Languages; First Rank General Standing; Prize in German; Prize in English Literature.

CUSHING, H. B.—First Rank Honours and Prize in Natural Science; First Rank General Standing; Prize in Zoology.

PITCHER, ETHELWYN.—First Rank Honours and Prize in Mental and Moral Philosophy; First Rank General Standing; Prize in English.

CAMPBELL, KATE M.—First Rank Honours and Prize in Mental and Moral Philosophy; First Rank General Standing.

MITCHELL ROBERT J. W.—First Rank Honours in Naturnal Science; First Rank General Standing.

MESSENGER, WILLIAM J.—First Rank Honours and Prize in English Language, Literature and History.

TATLEY, ELEANOR.—First Rank Honours and Prize in Natural Science; Prize in Zoology.

DRUM, LORNE.—First Rank Honours and Prize in English Language, Literature and History.

PARKER, EDWIN G.—First Rank Honours in English Language, Literature and History.

DAVEY, R. G.—First Rank Honours and Prize in Mental and Moral Philosophy.

BARRON, ROBERT H.—First Rank General Standing; Prize in Classics.

ROBINS, GEORGE D.—First Rank General Standing.

REEVES, A. C.—First Rank General Standing; Prize in Hebrew.

ROSS, R. O.—Neil Stewart Prize in Hebrew.

RAYNES, ETHEL.—Prize in English.

PASSED THE SESSIONAL EXAMINATIONS.

Barron, Wood, Kollmyer, Archibald; Cushing and Pitcher, equal; Campbell (K.), Robins (G. D.), Reeves, Mitchell, Ross, Jaquays, Taylor; Messenger and Raynes, equal; Pritchard, Tatley, Drum, Parker, Davey, Hamilton; Mackenzie and MacLennan, equal; Blachford and Brown, equal; Williams and Davidson, equal; Mewhort; Anderson and Leach, equal; Graham; Carmichael and Smyth, equal; Colquhoun, Jekyll, Allen.

SECOND YEAR.

BROWN, JAMES T.—(Huntingdon Academy, P. Q.)—First Rank Honours and Prize in Mathematics; First Rank General Standing.

FAIRCLOUGH, ELIZABETH M.—(Hamilton Collegiate Institute).—Second Rank Honours and Prize in Mathematics.

JAMES, AGNES S.—(McGill Normal School).—First Rank General Standing Prize in Greek; Prize in English and History; Prize in Botany.

GORDON, JOHN.—(Prince of Wales' College, Charlottetown, P. E. I.)—First Rank General Standing; Prize in Psychology and Logic; Prize in Hebrew.

MANSUR, CHARLES.—Standstead Wesleyan College.—First Rank General Standing; Prize in Botany.

SMARDON, CHARLOTTE.—(McGill Normal School).—First Rank General Standing

REAY, JANET A.—(McGill Normal School).—Prize in Psychology and Logic.

JACKSON, ANNIE L.—(Misses Symmers and Smith.)—Prize in German; Prize in French.

SEYMOUR, MARTHA.—(Mrs. Lay's School.)—Prize in Latin.

HONEYMAN, H. A.—Prize in French.

LEE, MABEL.—Hight School, Quebec.—Prize in Botany.

SKEELS, ALBEE A.—Prize in Latin; Prize in French.

PASSED THE SESSIONAL EXAMINATIONS.

James, Gordon, Mansur, Smardon, Brown (J.), Mahaffy, LeRossignol; Reay and Wilson, equal; Hickson, Fairclough, Jackson, McIver, Gurd, Millar, Seymour, Honeyman, Lee, Skeels, Townsend, Donahue, Killaly, Smith, Brown (C. L.), Hutchison, Muir, Brittain, Internoscia *s*, Macdonald *s*, McGerrigle *s*, McVicar (A.) *s*, McVicar (R.) *s*, Pratt *s*.

s.—With Supplemental in one subject—arranged alphabetically.

FIRST YEAR.

Smith, Alistair.—(Petticodiac School, N. B.)—First Rank Honours and Prize in Mathematics; First Rank General Standing; Prize in German; Charles G. Coster Memorial Prize.

Dickson, E. H. Trenholme.—(Private Tuition).—Second Rank Honours and Prize in Mathematics.

Dickson, Sydney M.—(St. Francis College, Richmond).—Second Rank Honours and Prize in Mathematics.

Davis, David T.—(Montreal High School).—First Rank General Standing; Prize in Greek; Prize in English; Prize in French; Prize in Roman History; Prize in Chemistry.

Craig, William W.—(Montreal High School).—First Rank General Standing; Prize in Latin.

Gyde, Lilian K.—(McGill Normal School).—Prize in French; Prize in Roman; History; Prize in Chemistry.

Day, Frank J.—(Private tuition).—Prize in Hebrew.

PASSED THE SESSIONAL EXAMINATION.

Davis, Smith, Craig (W. W.), Graham (A.), Blackett, Ogilvy, Gyde, Radford, Dickson (S. M.), Dickson (E H. T.), Day, Barlow, Hanran, Graham (F. H.), Craig (M.), Warner, Bremner, Stewart (J C.), Harvey, Fraser, Bickerdike *s*, Hopkins *s*, Howell *s*, Lewis *s*, McGregor *s*, Mackenzie *s*, Naylor *s*, Rodger *s*, Seymour *s*, Shaw (C. M.) *s*, Shaw (S. L.) *s*, Spearman *s*.

s.—With supplemental Examinations in one subject—arranged alphabetically.

SPECIAL PRIZE.

Charles G. Coster Memorial Prize.—To that undergraduate of the First, second and third Year, from the Maritime Provinces, who, in the opinion of the Faculty, has passed the most satisfactory Sessional Examination.—Smith (Alistair), New Brunswick.

AWARD OF SCHOLARSHIPS AND EXHIBITIONS, SEPTEMBER, 1890.

I. Third Year.—Scholarships (tenable for two years).

Mathematical Scholarships.—*Wood, A. B., *Robins, G. D.

Natural Science Scholarships.—*Cushing, H. B.

Classical and Modern Languages Scholarships.—*Archibald, E. § Kollmyer, W. H.

---

*Annual value of Scholarship or Exhibition, $125; founder, Mr. W. C. McDonald.

II.—Second Year.—Exhibitions (tenable for one year).

‡ Fairclough, Elizabeth, Hamilton Collegiate Institute, O.

† Brown, James, Huntingdon Academy, Q.

Bursary.

§§ McIver, E. J., Montreal High School, Q.

III. First Year.—Higher Entrance and Exhibition Examinations.

Class I.—*Craig, W. W., Montreal High School, *Exhibition.*

*Dickson, E. H. Trenholme, Private Tuition, *Exhibition.*

†† Graham, Angus, Glencoe High School, *Exhibition.*

Class II.—§§ Blackett, John, Huntingdon Academy, *Bursary.*

§§ Dickson, Sydney, St. Francis College, *Bursary.*

SESSIONAL EXAMINATIONS, 1891.

McGILL COLLEGE.

The mark in the following list indicates Partial or Occasional Students.*

GREEK.

B.A. Ordinary.—*Class I.*—Gunn, Pattison, Robins (Lilian L.), McGregor (John M.), Ellenwood. *Class II.*—Hall (R. S.) and Holden, equal; Dobson and McGregor (E. B.), equal; Tees; Moore and Pidgeon, equal; Oliver, Young, Hipp, Cole. *Class III.*—McLeod, Ellicott, Russell.

Third Year.—*Class I.*—Barron and Kollmyer and Wood (*Prizes*), equal Robins (Geo. D.), Reeves, Campbell (Katharine M.). *Class II.*—Ross (R. O. R.), Williams, Brown. *Class III.*—Taylor, Parker; Hamilton and Pritchard, equal; Ellicott, Blachford, McLennan, Colquhoun Anderson, Jekill.

Second Year.—*Class I.*—James (*Prize*), Mansur, Mahaffy, Skeels, McIver Fairclough, Gordon. *Class II.*—Gurd and Smardon, equal; Hickson Reay; Donahue; Lee and Millar, equal; Wilson, Brown (J. T.). *Class III.*—Pratt, Ballantyne; Adams (J. R.) and Honeyman and Hutchison, equal; Brittain and McVicar (R. M.), equal; Smith, Townsend, McVicar (A.), Killaly; Brown (C. L.) and Robertson, equal; McGerrigle, Patterson, Muir, Munn.

First Year.—*Class I.*—Davis (*Prize*); Dickson (S. M.) and Blackett, equal; Craig (W. W.), Graham (A.), Smith. *Class II.*—Dickson (E. H. T.), Hanran, Hopkins, Graham (F. H.); Barlow and Gyde, equal; Lewis and Parmalee, equal; Craig (M.). *Class III.*—Bremner and Day, equal; Bickerdike, Howell, Naylor, Duclos, Shaw, Fraser; Cleland and Harvey equal; Boyd (R.), Stewart (J. C.), Bond; Lambly and McGregor and Rodger, equal.

---

‡ Annual value of $120.—Founder, Miss Barbara Scott.

† do $125.—Donor, Mr. George Hague.

‡ do $100.—(*Donalda Dept.*) Donor, Sir Donald Smith.

†† do $100.—Founder, Major Mills.

Value of *Bursary*, $62.50.—Donor, Mr. W. C. McDonald.

LATIN.

B.A. ORDINARY.—*Class I.*—Ellenwood and Moffatt, equal; McGregor (Jno. M.) and Pattison, equal; Warne (John F.), Robins (Lilian B.). *Class II.*—Hall (Elizabeth G.) and McDougall and Smith, equal; Oliver, Hall (R. S.), Moore; McGregor (E. B.) and Young, equal. *Class III.*—Warne (W.A.) Guthrie, McLeay.

THIRD YEAR.—*Class I.*—Barron and Kollmyer and Wood (*Prizes*), equal; Archibald; Reeves and Robins (Geo. D.), equal; Cushing, Campbell (Kath. M.), Pitcher. *Class II.*—Johnson, Raynes; Macdonald and Mitchell, equal; Angus and Davidson, equal. *Class III.*—Jaques, Mewhort, Drum, Tauley, Leach; Carmichael and Smyth, equal; Lyman, Allen, Graham.

SECOND YEAR.—*Class I.*—Seymour, Skeels (*Prize*); Jackson and James, equal Mahaffy, Hickson, Fairclough, Mansur; Brown (J. T.) and Le Rossignol equal. *Class II.*—Smardon, Townsend; Brown (C. L.) and Millar equal; Gordon, Lee, Pratt; Donahue and Honeyman and Wilson, equal; Gurd; Killaly and McIver and Reay, equal. *Class III.*—Brittain, Smith Muir; Ballantyne and McGerrigle, equal; McVicar (R. M.); Munn, and Patterson, equal; Hutchison, Internoscia, Robertson, McCoy.

SECOND YEAR.—(*Latin Prose Composition*).—*Class I.*—Mahaffy, Gordon, Mansur, Hickson; Muir and Seymour and Skeels, equal. *Class II.*—Brown (J. T.) and James, equal; Le Rossignol; Donahue and Townsend, equal; Smith, Fairclough; Jackson and Pratt, equal; Ballantyne and Honeyman, equal. *Class III.*—Hutchison and Wilson, equal; Brown (C. L.) and McIver, equal; Gurd; Killaly and Lee and McGerrigle and McVicar (R. M.) and Millar, equal; Patterson, Smardon, McDonald. Internoscia; Brittain and McVicar (A.) and Reay, equal.

FIRST YEAR.—*Class I.*—Seymour, Craig (W. W.) (*Prize*), Davis(*Prize*), Graham (A.), Bickerdike, Smith; Dickson (S. M.) and Gyde, equal; Graham (F. H.). *Class II.*—Blackett; Dickson (E. H. T.) and Ogilvy (I.), equal; Hanran and Parmealee and Radford,equal; Hopkins, Warner; Barlow and Bremner and Craig (M.), equal. *Class III.*—Mackenzie and Solomon equal; Spearman, Hargrave, Howell, Lewis; Day and Naylor, equal Shaw (L.), Stewart (J.C.), Brown; Cleland and Duclos, equal; Harvey; Ogilvy (C.), Shaw (C. M.); Bond and Fraser (F. C.) and McGregor, equal.

ROMAN HISTORY.

FIRST YEAR.—*Class I.*—Davis (*Prize*) and Gyde (*Prize*), equal; Craig (W. W.) and Smith, equal; Solomon; Bickerdike and Graham (A.) and Hanran, equal; Blackett, Radford. *Class II.*—Dickson (S. M.) and Hargrave and Parmealee and Seymour, equal; Dickson (E. H. T.), Bond; Graham (F. H.) and Shaw (C. M.), equal; Barlow and Hopkins and Ogilvy (J.), equal; Warner, Bremner; Mackenzie and Rodger, equal; Day and Duclos and Shaw (L.), equal. *Class III.*—Craig (M.), Fraser, Stewart (J. C.), McGregor, Lewis, Clendinning; Harvey and Spearman, equal; McPherson, Lambly; Brown and Church and Howell, equal.

MENTAL AND MORAL PHILOSOPHY.

B.A. Ordinary.—(*Moral Philosophy*).—*Class I.*—Warne (J. F.); Gunn and Le Rossignol (W.J.), equal; MacDougall, Robins, Pidgeon, Pattison, Hall (R. S.); Warne s W. A.) and Smith (G. L.), equal; McGregor (J. M.) *Class II.*—Oliver, Hall (B)., Young, McGregor (E. B.); Moffatt and Tees, equal; *Tener, Russell. *Class III.*—McMillan; Guthrie and Ellenwood, equal; Dobson; Goff and Moore and Holden, equal; Whyte (J. T.), Hipp, *Elliott; Cole and Craik, equal; MacLeay; McCullough and McLeod (N.), equal; *Eadie.

Third Year.—(*Mental Philosophy*).—*Class I.*—Kollmyer and *Le Rossigno (A. E.) and Pitcher, equal; Campbell (K.), Davey; Cushing and *McKinley, equal; Mackenzie, Pritchard; *McArthur and Messenger, equal; *Class II.*—Anderson, Ross, *Burke. *Class III.*—Hamilton and Jekill equal; Colquhoun, Parker; *Barnby and McLennan and *Sanderson equal; *Logan and Taylor, equal; Allen, Carmichael, Campbell (R.) de *Aikenhead and *Murray, equal; *Burnett, *Adams, Brown.—*Aegra* MacDonald.

Prizes:—Kollmyer, Pitcher, Campbell (K.), Davey.

Second Year.—(*Logic*).—*Class I.*—Reay, MacIver, Vaughan; Brown (J.) and Le Rossignol (M.) equal; James; Gordon and Smardon, equal. *Class II.*—Mansur; Killaly and Fairclough, equal; Seymour and Wilson, equal Donahue, Jackson; Brown (C. L.) and Gurd, equal; Honeyman. *Class III.*—Townsend; Muir and Millar, equal; Ballantyne; Mahaffy and Skeels, equal; Munn; Hickson and Smith, equal; Pratt; McGerrigle and MacVicar (A.), equal; Internoscia and MacVicar (R. M.), equal; Aikenhead and Lee (M.), equal; Macdonald (J.); Adams (J. R.) and Jones and Brittain, equal; MacInnes and Robinson, equal; Grisbrook and Walker, equal; Sanderson; Hutchison and Ewan, equal; Morison Strong.

Prizes:—Reay, Gordon.

EUROPEAN HISTORY.

B.A. Ordinary.—*Class I.*—Gunn, Warne (J. F.), MacDougall, Warne (W. A.) Holden, Pidgeon. *Class II.*—Cole, Smith, Guthrie, Moffatt, Russell Whyte (J. T.), Craik, Tees. *Class III.*—Elliott (E.); Moore (L.) and McCullough, equal; MacLeay, Goff.

ENGLISH LITERATURE AND RHETORIC.

Third Year.—*Class I.*—Archibald C(*Prize*) and Messenger, equal; Pitcher and Raynes, equal (*Prizes*); Parker, Drum, Taylor, Mitchell, Macdonald. *Class II.*—Mewhort, Blachford, MacLennan; Carmichael and Leach equal. *Class III.*—Jekill and Ross, equal; Allen, Graham, Lyman, Davidson.

ENGLISH LITERATURE AND HISTORY.

SECOND YEAR.—*Class I.*—James (*Prize*) and *Hendrie, equal; LeRossignol, McIver, Gordon, Donahue; Hutchinson and Townsend and Lee, equal; Gurd and Mahaffy and Seymour and Skeels, equal; Wilson; Hickson and Milla and Reay and Smardon, equal. *Class II.*—Grisbrooke; Killaly and Mansur, equal; Ballantyne and Smith, equal; Honeyman, McVicar (A.), Brown (J. T.); *Mervyn and Muir, equal; Brown (C. L.) and Fairclough and Munn, equal; Jackson, McVicar (R. M.). *Class III.*—Pratt; Brittain and Macdonald and Robertson, equal; Internoscia and Morison and Patterson, equal; Elliott and McGerrigle, equal.

ENGLISH LITERATURE.

FIRST YEAR.—*Class I.*—Davis (*Prize*), Craig, Messenger; Lewis and Ogilvy (I.) and Smith, equal; Barlow. *Class II.*—Strong, Gyde; Blackett and Day, equal; Naylor; Mackenzie and Radford, equal; Hanran, Murphy. *Class III.*—Graham (A.), Cleland; Lambly and Parmelee and Rodger equal; Dickson (S. M.); Bickerdike and Graham (F.) and Ogilvy (C.) equal; Warner, Duclos; Clendinning and Stewart (J. C.), equal; Craig Dickson (T.); Fraser and Rickey and Stenning, equal; Howell; Bremner and Shaw (S. L.) and Spearman, equal; Harvey; Blunt and Gilmour equal.

MECHANICS AND HYDROSTATICS.

B. A. ORDINARY.—*Class I.*—McGregor (J. M.), Robins (L. B.), Oliver, Moore Pattison. *Class II.*—Tees, Ellenwood, McGregor (E. B.), Smith (G.L.; Hipp and Moffatt, equal; Goff. *Class III.*—Dobson, MacDougall Whyte (J. T.), Holden, McLeay, Young, McCullough, Pidgeon, McLeod

THIRD YEAR.—*Class I.*—Barron and Wood, equal; Cushing, Robins, Kollmyer. *Class II.*—Jaquays, Taylor, Davey, Drum, Mackenzie. *Class III.*—Blachford, Williams, Raynes; Anderson and Davidson, equal; Allen, Tatley, Colquhoun, Graham (G. D), Messenger, Carmichael, Smyth, Leach, Mewhort.

ASTRONOMY AND OPTICS.

B. A. ORDINARY.—*Class I.*—McGregor (J. M.), Warne (J. F.), Oliver, Hall (R. S.); Pattison and Robins, equal; Hall (E.). *Class II.*—Holden) Moore, Young, McLeay. *Class III.*—Tees, Warne (W. A.); Cole and, Ellenwood, equal; White (J. T.), Goff, McCullough, Dobson, McLeod.

THIRD YEAR.—*Class I.*—Wood, Robins. *Class II.*—Jaquays, Taylor. *Class III.*—Allen

EXPERIMENTAL PHYSICS. (*Electricity and Sound*)

B A. ORDINARY.—*Class I.*—Warne (J. F.), Oliver, McGregor (J. M.), Tees. *Class II.*—Hall (B.), Macdougall, Holden, Cole. *Class III.*—Warne (W. A.), Whyte (J. T.), Goff, Guthrie, Dobson, Hipp, McLeay, Hall (R. S.).

THIRD YEAR.—*Class I.*—Wood, Robins, Taylor. *Class II.*—Ferguson.*—*Class III.*—Williams, Davey, MacKenzie, Colquhoun; Anderson and Smyth, equal.

THIRD YEAR.—*Class I.*—Barron, Archibald, Campbell (R.) ; Angus and Blachford (A. C.) and Jaquays, equal ; Mitchell. *Class II.*—Davidson ; Graham and Raynes, equal ; Brown and Leach, equal. *Class III.*—Lyman, Smyth, Mewhort, Blachford (H.), Ellicott.

SECOND YEAR.—*Class I.*—Jackson (*Prize*); Honeyman *Prize*) and Skeels (*Prize*), equal ; Smardon, Wilson. *Class II.*—Hickson, Millar, Reay ; Donahue and James, equal ; LeRossignol, Internoscia, Brown (C.), McIvor ; Mansur and Seymour, equal. *Class III.*—Ballantyne and Brittain, equal ; Killaly ; Gurd and, MacDonald, equal ; McVicar (R.) and Lee, equal ; Munn, McGerrigle, Thompson.

FIRST YEAR.—*Class I.*—Davis (*Prize*), Gyde (*Prize*), Craig (Wm. V.). *Class II.*—Duclos and Radford, equal ; Hanran and Hopkins, equal ; Hargrave and Parmelee, equal ; Blackett and Warner, equal ; Seymour, Craig (M.) ; Bickerdike and Bond and Mackenzie, equal. *Class III.*—Shaw (L.) Dickson (S. M.) ; Dickson (E. H. T.) and Shaw (C. H.), equal ; Murphy and Ogilvy (I.), equal ; Lewis ; Boyd and Lambly, equal ; Solomon ; Barlow and Brown, equal ; Ogilvy (C), Spearman, Stenning ; Fraser and Rodger, equal ; MacPherson.

GERMAN.

B. A. ORDINARY.—*Class I.*—*Turner, Ellenwood, Hall (E.). *Class II.*—None *Class III.*—MacMillan (H.).

THIRD YEAR.—*Class I.*—Archibald (*Prize*), Angus. *Class II.*—Tatley. *Class III.*—Ross (J. K.) and Williams, equal.

SECOND YEAR.—*Class I.*—Jackson (*Prize*), Seymour (M.) ; LeRossignol (M.) and Smardon, equal ; Reid (E. H.). *Class II.*—Seymour (J. L.). *Class III.*—MacDonald (J.).

FIRST YEAR.—*Class I.*—Seymour (C.), MacKenzie (*Prize*), Smith (*Prize*) *Class II.*—Ogilvy (Isa), Brown Jessie), Radford. *Class III.*—McLea, Hargrave, Solomon, Cochrane, Shaw (S. Louise), Harvey, Warner, Murphy, Howell.

HEBREW.

A. ORDINARY.—*Class I.*—Russell (A.), Gunn, Tener,* Pidgeon. *Class II.*—McLeod (N.), McCullough, Dobson, Hipp. *Class III.*—Craik (G.), Guthrie (D.).

THIRD YEAR.—*Class I.*—Ross, Reeves (*Prize*), Eadie.* *Class II.*—Beattie*, Pritchard, McKenzie, Hamilton. *Class III.*—Davey.

SECOND YEAR.—*Class I.*—Gordon (*Prize*), Burnett,* Mahaffy, McArthur,* Adams (R.). *Class II.*—Adams* (J. R.), Massicotte,* McKinley,* Elliott (E.), Barnby,* Muir, McVicar ; Hutchison (D.) and Grisbrook and Robertson, equal Townsend. *Class III.*—Pratt (F.), Patterson (W.), Rondeau,* Savignac*, Smith (E. F.), Clendinnen,* McLaren,* Sauré (Albert).*

GEOMETRY AND ARITHMETIC.

SECOND YEAR.—*Class I.*—Brown (J.), Gordon, Fairclough, Wilson, Hickson. *Class II.*—Mansur; Killaly and James, equal; Smith and Reay, equal; Honeyman and Smardon, equal; McGerrigle and Millar, equal; Townsend. *Class III.*—Mahaffy; Gurd and Jackson, equal; Brown (C. L., and Le Rossignol, equal; Thompson and McCoy, equal; MacDonald,) McVicar (A.); Munn and Brittain and Lee, equal; Donahue and Seymour, equal; Robertson, Patterson, Hutchison, McIver, Skeels, Internoscia, Pratt, Muir.

FIRST YEAR.—*Class I.*—Smith, Dickson (T.), Dickson (S.), Davis; Craig (W. W.) and Graham (A.) and Hopkins, equal. *Class II.*—Blackett and Ogilvy (C.), equal; Barlow; Boyd (R.) and Brown and Harvey, equal; Stewart (J. C.), Day, Ogilvy (I.), Naylor, Solomon. *Class III.*—Messenger, Gyde; Hanran and Shaw (L.), equal; Radford, MacKenzie, Rodger; Fraser and Seymour, equal; Duclos and Spearman, equal; Lambly, Bickerdike; Graham (F.) and Stenning and Warner, equal; Craig (M.) and Shaw (C.), equal; Gilmour; Hargrave and Rickey, equal; MacGregor, Parmelee, Howell, Bremner.

TRIGONOMETRY AND ALGEBRA.

SECOND YEAR.—*Class I.*—Fairclough, Brown (J.), Mansur, Wilson, Hickson, Gurd, Honeyman, Reay. *Class II.*—Gordon, Mahaffy, James, Jackson, Smith (E. F.); McIver and McVicar (A.), equal; Internoscia, McVicar (R.); Killaly and Macdonald, equal. *Class III.*—Lee, Townsend; Thompson and Smardon, equal; Muir and Brittain and Millar and Seymour, equal; Hutchison, LeRossignol, Robertson, Munn; Donahue and McGerrigle, equal; McCoy, Brown (C. L.), Pratt, Skeels.

FIRST YEAR.—*Class I.*—Smith; Blackett; Davis and Graham (A.), equal; *Class II.*—Craig (W. W.), Dickson (T.), *Class III.*—Dickson (S.), Day Radford, Bremner, Hopkins, Shaw (C.); Harvey and Messenger and Ogilvy (I.), equal; Craig (M.); Ogilvy (C.); Barlow and Naylor, equal; Boyd (R.), Stewart (I. C.), Seymour; Fraser and Lambly, equal; Hargrave, Rodger; Gyde and Lewis, equal; Graham (F.) and Hanran, equal Bickerdike and Warner, equal; MacGregor, Howell, Stenning, Spearman.

HONOUR EXAMINATIONS IN MATHEMATICS AND NATURAL PHILOSOPHY.

THIRD YEAR.—*First Rank Honours.*—Wood (*Prize*).

SECOND YEAR.—*First Rank Honours.*—Brown (James) (*Prize.*)

Second Rank Honours.—Fairclough (*Prize*).

FIRST YEAR.—*First Rank Honours.*—Smith (A. (*Prize*).

Second Rank Honours.—Dickson (E. Trenholme) (*Prize*), Dickson (Sydney) (*Prize*).

FRENCH.

B.A. ORDINARY.—*Class I.*—Moffatt, Smith. *Class II.*—Pattison, McGregor (E. B.), Young. *Class III.*—Robidoux.

First Year.—*Class I.*—Cleland, Day (F.) (*Prize*) Vaughan, Waller. *Cass II.*—Graham (F. H.), Graham (Angus), Bremner, Naylor, Burke. *Class III.*—Mervyn, Maynard (J.), Truax, McGregor, Boyd, Stewart (J. C.), Giroulx, Donaldson, Baker, Beauchamp, Ridgeway, Sincennes, Sauvé (Alfred).

GEOLOGY.

B.A. Ordinary.—*Class I.*—Gunn and LeRossignol, equal; Robins, McDougall; McGregor (J. M.), Pattison; Hall (E.) and Warne (J.), equal. *Class II.*—Moffatt, McGregor (E. B.), Smith, Warne (W.), Oliver; Ellenwood and Flagg,* equal; Hall (R. S.), Cole, Pidgeon. *Class III.*—Craik and Morison, equal; Tener,* Eadie,* Elliott, Hipp, Russell.

ZOOLOGY.

Third Year.—*Class I.*—Cushing (*Prize*) and Tatley (*Prize*), equal: Barron and Lyman, equal; Campbell (K.), Jaquays, Pitcher, Mitchell, Williams, McArthur, McLellan, Bucke*, Ross (R. O.), Archibald, Taylor, McKinley,* Brown,* Smyth, McDonald, Raynes, Blachford, Leach, Pritchard Anderson, Elliott, Ross (J. K.), Davidson, Reeves. *Class II.*—Burnet,t* Hamilton, Mewhort, Drumm, Colquhoun, Graham, Parker, McInnes,* Carmichael, Messenger, Barnby,* Morison,* Sanderson,* Logan.* *Class, III.*—Beattie*, Jekyll, Campbell (R.)

BOTANY.

Third Year.—*Class I.*—Cush'ng, Tatley.

Second Year.—*Class I.*—Lee, (*Prize*) James, (*Prize*) Reay, LeRossignol, Mansur (*Prize*), Millar; Wilson and Gordon, equal; Gurd, Morison, *Brown (J.T.) Smardon and Ewan,* equal; Mahaffy. *Class II.*—Killaly, Townsend, Ballantyne; Hickson and MacIver and Vaughan,* equal; Clendinning Hutchison; Jackson and Honeyman, equal; McVicar (A.) and Smith, equal; Brown (C. L.). *Class III.*—Donahue, McCoy, Muir, Seymour Grisbrooke, Fairclough, Brittain, Internoscia, Skeels, Scott, Thompson, Irwin,* Robertson, Massicotte,* Wilkinson,* MacDonald, MacVicar (R. M.), Walker,* Jones,* Patterson.

CHEMISTRY.

First Year.—*Class I.*—Davis (*Prize*), Craig (Wm.), McKinley, Graham (A.) Gyde (*Prize*); Ogilvy (I.) and Radford and Smith, equal. *Class II.*—Boyd (R.), Naylor; Barlow and Lewis, equal; Day. *Class III.*—Fraser and Hopkins and Strong, equal; Blackett; Brown and Burke, equal; Warner, Stewart (Jno.), Stenning; Craig (M.) and Dickson (T.) equal; Solomon, Seymour; Blunt (F. H.) and Boyd (L.), equal; Graham (F.) and McKenzie, equal; Harvey, McDuffee, Ogilvy (C.); Dickson (S.) and Shaw (L.), equal; McGregor and Rickey and Spearman, equal; Hanran and Shaw (C.), equal; Bremner, Rodger.

Note.—*The Prizes* in the Donalda Department are from the income of the Hannah Willard Lyman Memorial Fund.

MORRIN COLLEGE.

B.A. ORDINARY EXAMINATION.

GREEK.—*Class II.*—Brown.
LATIN.—*Class II.*—Brown.
MECHANICS AND HYDROSTATICS.—*Class III.*—Brown.
ASTRONOMY AND OPTICS.—*Class II.*—Brown. *Class III.*—Lindsay.
MORAL PHILOSOPHY.—*Class I.*—Brown. *Class II.*—None. *Class III.*—Lindsay.
FRENCH.—*Class III.*—Brown.
HEBREW.—*Class I.*—Lindsay.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Brodie, Macadam. *Class II.*—Gale. *Class III.*—Chambers.
LATIN.—*Class I.*—Macadam. *Class II.*—Brodie, Gale. *Class III.*—Chambers.
LATIN PROSE COMPOSITION.—*Class II.*—Brodie. *Class III.*—Macadam; Chambers and Gale, equal.
TRIGONOMETRY AND ALGEBRA.—*Class II.*—Macadam, Brodie. *Class III.*—Gale Chambers.
GEOMETRY AND ARITHMETIC.—*Class III.*—Brodie, Macadam; Chambers and Gale, equal.
LOGIC.—*Class I.*—Macadam, Brodie, Gale. *Class II.*—None. *Class III.*—Chambers.
ENGLISH LITERATURE AND HISTORY.—*Class I.*—Macadam, Gale. *Class II.*—Chambers, Brodie.
FRENCH.—*Class II.*—Macadam; Brodie and Gale, equal; Chambers.

ST. FRANCIS COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class III.*—Prendergast.
LATIN.—*Class II.*—Hewitt. *Class III.*—Prendergast.
LATIN PROSE COMPOSITION.—*Class III.*—Prendergast, Hewitt.
TRIGONOMETRY AND ALGEBRA.—*Class I.*—Hewitt. *Class II.*—None. *Class III.*—Prendergast.
GEOMETRY AND ARITHMETIC.—*Class II.*—Hewitt. *Class III.*—Prendergast.
LOGIC.—*Class II.*—Hewitt. *Class III.*—Prendergast.
ENGLISH LITERATURE AND HISTORY.—*Class I.*—Hewitt. *Class II.*—Prendergast.
FRENCH.—*Class II.*—Prendergast, Hewitt.
GERMAN.—*Class II.*—Hewitt.

STANSTEAD WESLEYAN COLLEGE.

FIRST YEAR.

LATIN.—*Class III.*—McDuffee (M.).
ROMAN HISTORY.—*Class II.*—McDuffee (M.).
GEOMETRY AND ARITHEMETIC.—*Class III.*—McDuffee.
TRIGONOMETRY AND ALGEBRA.—*Class III.*—McDuffee.
CHEMISTRY.—*Class III.*—McDuffee.
ENGLISH.—*Class II.*—McDuffee.
FRENCH.—*Class II.*—McDuffee.
GERMAN.—*Class II.*—McDuffee.

GYMNASTICS.

Wicksteed Medals for Physical Culture.

Silver Medal.—W. Oliver, 4th year.

Bronze Medal.—H. M. Killaly, 2nd year.

Honorable Mention.—Cole (A. A.), Le Rossignol (W. G. L.), Coburn (A. D.) Murphy (D. A.), Brown (G. S.).

DONALDA PRIZES FOR WOMEN.

Prize—E. Smith
Prize—K. Campbell
Hon. Mention—E. Wilson, M. Le Rossignol

FACULTY OF APPLIED SCIENCE.

GRADUATING CLASS.

Ernest Albert Stone.—British Association Gold Medal; British Association Exhibition; certificates of merit in Theory of Structures, Hydraulics, Designing and Materials. Prize for Summer Report.

Robert Bickerdike.—Certificate of merit in Designing and Materials.

Percy Howe Middleton.—Stanley Silver Medal; certificates of merit in Steam, and Mechanical Drawing.

Henry Martyn Ramsay.—Stanley Silver Medal (or Prize); certificate of merit in Designing.

Thomas Henry Wingham.—Prize for Summer report; certificate of merit in Materials.

William Henry H. Walker.—First Rank Honours in Natural Science; certificates of merit in Materials and Assaying.

Hugh Yelverton Russel.—Second Rank Honour in Natural Science; certificate of merit in Materials.

John Edward Schwitzer.—Certificate of merit in Materials.

THIRD YEAR.

George Sinclair Smith.—Prizes in Descriptive Geometry, Theory of Structures, Steam Machinery and Millwork, and Mechanical Drawing.

Charles B. Kingston.—Prizes for Summer Report, and Mining.

Peter Henry LeRossignol.—Prizes in Practical Chemistry, Theoretical Chemistry, Experimental Physics, Mathematical Physics, Mineralogy and Blowpiping, and Zoology.

Elworth Bolton.—Prize for Mathematical Work, (Transit)
Henry B. Stuart.—Prize for Mathematical Work, (Level)

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering.

IN ORDER OF MERIT.

James George R. Wainwright, Ellsworth Bolton, James Tighe, Henry B. B. Stuart, Peter Joseph Murphy.

Mechanical Engineering.

IN ORDER OF MERIT.

George Sinclair Smith, William Norton Cunningham, William Henry Warren.

Mining Engineering.

IN ORDER OF MERIT.

John Murray McGregor, Charles B. Kingston, James G. Purves.

Practical Chemistry.

IN ORDER OF MERIT.

Peter Henry LeRossignol, Walter Chamblet Adams.

Special Examination.—Alonzo Klock.

SECOND YEAR.

Howard Turner Barnes.—Prizes in Chemistry, Descriptive Geometry, Experimental Physics, Botany.
John Burns.—Prize in Mechanical Drawing.
Louis Greenberg.—Prize in Surveying.
Louis Herdt.—Prizes in Mechanism and French.
Robert Claude Holman.—Prize in Mathematics.
James Alexander MacPhail.—Prizes in Mathematical Physics, Mathematics and Zoology.

PASSED THE SESSIONAL EXAMINATION.

Civil Engineering.

IN ORDER OF MERIT.

James Alexander MacPhail, Louis Greenberg, Alexander Scott Dawson, William Arthur Bowden, Arnold James Ryan, John Rankin, James Albert Stevenson.

Mechanical Engineering.

IN ORDER OF MERIT.

Louis Herdt, John Burns, David A. Murphy, William Pitt Laurie, Robert Claude Holman, Arthur W. K. Massey.

Mining Engineering.

IN ORDER OF MERIT.

HENRI HERDT, JOHN HAMILTON FEATHERSTON, FRANK LAMBERT.

FIRST YEAR.

ORTON EDWARD S. WHITESIDE.—Prizes in Mathematics and General Chemistry.
FRANK HENRY PITCHER.—Prize in English and Practical Chemistry.
WILLIAM ARCHIBALD DUFF.—Prize in Mathematics.
MATTHEW FRANCIS CONNOR.—Prizes in Mathematics and German.
CHARLES H. B. LONGWORTH.—Prizes in Mathematics.
HERBERT MOLSON.—Prizes in English and French.

PASSED THE SESSIONAL EXAMINATION.

IN ORDER OF MERIT.

William Archibald Duff, Orton Edward S. Whiteside, Frank Henry Pitcher; Matthew Francis Connor and Herbert Molson, equal; Charles H. B. Longworth, John William Morris, Walter Moffatt Scott, Arthur Langley Mudge, Leonard W. E. Dyer, Robert David Naas, William Wilson Leach, Alfred Collyer, John Herbert Larmonth, Henry Seward Mooney, John Kimball Scammell, John Muir Lorway.

SUMMER THESIS.

FOURTH YEAR.—*Class I.*—Stone (*cross sectioning in Valleys of Fraser and Thompson Rivers, B.C.*) and Wingham (*Detail Work in Loco Shops*), equal; Middleton (*Cable railroads*) and Walker (*Geology and Mining of the Sudbury region*), equal; Russel (*Geology of Lakes Edward and St. John District*). *Class II.*—Bickerdike (*Selection and preservation of timber*) and Bulman (*Masonry*), equal; Ramsay (*Injectors*) and Schwitzer (*Roads and Streets*), equal. *Class III.*—Williams (*Condensers*).

THIRD YEAR.—*Class I.*—Kingston (*International Colliery C.B.*); McGregor (*B. C. Arbitration* re *Can. Pac. Ry.* v. *Queen*) and LeRossignol (*Iodin*) *Absorption of Oils*), equal; Stuart (*Slate Quarrying*) and Smith (G. S., (*Car Wheels*), equal. *Class II.*—Klock (*Brompton Lake Asbestose*) Purves (*Gowrie Mine, C.B.*); Wainwright (*Montreal & Ottawa Ry.*) and Tighe (*Development and Testing of Turbine Wheels in U.S.*), equal; Warren (*Care and Management of Stationary Boilers*), Cunningham (*Elevators*). *Class III.*—Adams (*Douglass Copper Mine*) and Smart (*Loco. Repairs*), equal; Bolton (*Survey of Township of Shakespeare*); Copeland (*Champlain Canal*) and Murphy (P. J.) (*Double Track G.T. Ry. Preliminary Survey*), equal.

SANITATION.

FIRST YEAR.—*Class I.*—Whiteside, Plummer, Pitcher. *Class II.*—Morris and Mudge, equal; Duff, Dyer, Molson, Scott; Connor and Larmonth, equal; Longworth; Finley and Leach, equal; Cochrane and Naas, equal. *Class III.*—Scammell; Clark and Mooney, equal; Collyer and Sheraton, equal; Lorway, Fairie.

MATERIALS.

FOURTH YEAR.—*Class I.*—Wingham; Bickerdike and Russel and Schwitzer and Walker, equal; Stone, Middleton, Bulman. *Class II.*—Ramsay. *Class III.*—Williams.

THIRD YEAR.—*Class I.*—Tighe, McGregor, Kingston. *Class II.*—Murphy (P. J.) and Smith (G. S.), equal; Wainwright, Smart. *Class III.*—Bolton Cunningham; Copeland and Stuart, equal; Purves, Warren.

SECOND YEAR.—*Class I.*—Burns, Greenberg; Dawson (A. S.) and Holman equal; Ryan, Herdt (L.). *Class II.*—Herdt (H.) and Laurie, equal Lambert and Massey, equal; Bowden, Rankin, Stevenson, Murphy (D. A.). *Class III.*—Featherston, MacPhail, Gunn, Turner, Cochrane, Simpson.

HYDRAULICS (*Advanced Course*).

FOURTH YEAR.—*Class I.*—Stone, Bickerdike.

HYDRAULICS (*Ordinary Course*).

Class I.—Stone, Bickerdike. *Class II.*—Schwitzer, Ramsay; Bulman and Walker and Wingham, equal; Russel, Middleton. *Class III.*—McTaggart, Williams.

STEAM.

FOURTH YEAR.—*Class I.*—Middleton, Bickerdike, Walker, Ramsay, Russel. *Class II.*—Wingham, Stone; Bulman and Schwitzer, equal. *Class III.*—Williams.

THIRD YEAR.—*Class I.*—Smith, Warren, Cunningham. *Class II.*—None. *Class III.*—Smart.

ESSAY.

FOURTH YEAR.—*Class I.*—Walker and Wingham, equal; Stone; Bickerdike and Bulman and Russel, equal. *Class II.*—Middleton, Williams. *Class III.*—Ramsay and Schwitzer, equal.

THIRD YEAR.—*Class I.*—Le Rossignol, Kingston; Bolton and McGregor and McFarlane, equal. *Class II.*—Adams; Stuart and Purves, equal; Tighe. *Class III.*—Murphy (P. J.), Copeland, Wainwright.

SECOND YEAR.—*Class I.*—Dawson; Barnes and Greenberg and Ryan, equal. *Class II.*—MacPhail, Herdt (H.); Burns and Herdt (L.) and Stevenson, equal; Featherston, Holman, Murphy (D.), Gunn, Laurie; Lambert and Turner, equal; Bowden; Rankin and Simpson, equal; Massey, Cochrane.

FREEHAND AND OBJECT DRAWING.

FIRST YEAR.—*Class I.*—Plummer, Duff; Morris and Dyer, equal. *Class II.*—Longworth and Lorway, equal; Connor and Collyer, equal: Naas and Leach and Molson, equal; Scammell, Clark, Scott; Fairie and Finley and Pitcher, equal. *Class III.*—Mooney, Whiteside, Larmonth, Mudge, Sheraton.

LETTERING.

FIRST AND SECOND YEARS.—*Class I.*—Barnes and Burns and Plummer, equal; Morris, Herdt (L., Greenberg, Larmonth; Duff and Turner, equal. *Class II.*—Massey; Mudge and Naas, equal; Simpson, Herdt (H.), Pitcher Dyer and Molson, equal; Stevenson, Featherston, Longworth; Lorway and Scott, equal; Lambert and MacPhail. *Class III.*—Connor and Fairie and Finley and Cochrane (J. D.), equal; Whiteside and Laurie equal; Dawson, Collyer; Mooney and Leach and Scammell, equal; Cochrane (K. C., Gunn, Rankin, Clark, Bowden; Sheraton and Holman, equal.

DESCRIPTIVE GEOMETRY.

SECOND YEAR.—*Class I.*—Barnes, Burns, Herdt (L.). *Class II.*—MacPhail, Bowden, Herdt (H.), Greenberg, Ryan, Massey, Stevenson. *Class III.*—Dawson and Holman, equal; Laurie, Simpson, Rankin; Gunn and Lambert and Featherston and Turner, equal.

Class I.—(*Special Examination*).—Murphy.

THIRD YEAR.—*Class I.*—Smith. *Class II.*—Warren, Wainwright, Murphy, Kingston, McGregor, Cunningham, Rutherford, Bolton. *Class III.*—Stuart, Smart, Purves, Tighe, Copeland.

SURVEYING.

SECOND YEAR.—*Class I.*—Greenberg. *Class II.*—MacPhail, Herdt (L.), Stevenson, Ryan, Burns, Dawson. *Class III.*—Gunn, Featherston, Massey, Laurie, Cochrane, Holman, Lambert; Rankin and Turner, equal.

Class II.—(*Special Examination*).—Herdt (H.), Murphy.

THIRD YEAR.—*Class I.*—None. *Class II.*—Bolton, Stuart, Tighe. *Class III.*—Wainwright; Murphy and Copeland, equal.

GEODESY AND PRACTICAL ASTRONOMY.

FOURTH YEAR.—*Class II.*—Bulman.

METEOROLOGY.

Class I.—Bickerdike, Bulman, Antliff, Wingham. *Class II.*—Williams.

MECHANISM.

SECOND YEAR.—*Class I.*—Herdt (L.), Herdt (H.), MacPhail, Holman. *Class II.*—Laurie, Murphy (D.), Bowden, Burns. *Class III.*—Greenberg, Ryan, Turner, Lambert; Massey and Rankin, equal; Stevenson, Simpson.

KINEMATICS OF MACHINERY.

THIRD YEAR.—*Class I.*—Smith. *Class II.*—Cunningham.

DYNAMICS OF MACHINERY.

FOURTH YEAR.—*Class I.*—None. *Class II.*—Middleton, Ramsay, Wingham. *Class III.*—Williams.

MECHANICAL DRAWING.

SECOND YEAR.—*Class I.*—Burns. *Class II.*—Herdt (L.), Laurie, Darling; Turner and Murphy, equal. *Class III.*—Massey; Cochrane and Simpson, equal; Holman.

THIRD YEAR.—*Class I.*—Smith. *Class II.*—Warren. *Class III.*—Cunningham, Smart.

FOURTH YEAR.—*Class I.*—Middleton, Ramsay. *Class II.*—None. *Class III.*—Williams, Wingham.

DESIGNING.

FOURTH YEAR.—(*Civil Engineering Course*).—*Class I.*—Stone, Bickerdike, Bulman. *Class II.*—Schwitzer.

FOURTH YEAR.—(*Mechanical Engineering Course*).—*Class I.*—Ramsay. *Class II.*—Middleton, Williams. *Class III.*—Ramsay.

FOURTH YEAR.—(*Mining Engineering Course*).—*Class I.* Walker, Russel.

THEORY OF STRUCTURES (*Ordinary Course*).

FOURTH YEAR.—(*Civil Engineering Course*).—*Class I.*—Stone, Bickerdike. *Class II.*—Bulman, Schwitzer.

FOURTH YEAR.—(*Mechanical Engineering Course*).—*Class I.*—Wingham. *Class II.*—Middleton, Ramsay, McTaggart. *Class III.*—Williams.

THIRD YEAR.—*Class I.*—Smith (G. S.). *Class II.*—McGregor; Cunningham and Purves, equal. *Class III.*—Stuart and Warren, equal; Kingston and *Murphy (P. J., equal; Tighe, Smart, *Bolton, Wainwright, *Copeland.

* Supplemental in subject matter of Paper II.

THEORY OF STRUCTURES (*Advanced Course*).

FOURTH YEAR.—(*In order of merit*).—Stone, Bickerdike.

CHEMISTRY (*Practical.*)

FIRST YEAR.—*Class I.*—Pitcher, Long worth, Mudge, Greig, Whiteside, Duff, Molson, Leach, Morris. *Class II.*—*Fairie, Scott, Jones, *Finley, Lorway, Dyer, Naas, Plummer, Collyer, Mooney, Connor, Larmonth. *Class III.*—*Cochrane, Scammell, *Clark, Sheraton.

* Supplemental in Theoretical Chemistry.

SECOND YEAR.—(*Chemistry Course*).—*Class I.*—Barnes.

SECOND YEAR.—(*Mining Course*).—*Class I.*—None. *Class II.*—Herdt. *Class III.*—Featherston, Gunn, Lambert.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—LeRossignol. *Class II.*—Adams. *Class III.*—None.

Special Examination.—Class II.—Klock.

THIRD YEAR.—(*Mining Course*).—*Class I.*—None. *Class II.*—Kingston, Purves, McGregor. *Class III.*—None.

CHEMISTRY (*General*).

FIRST YEAR.—*Class I.*—Whiteside, Connor, Longworth, Morris, Molson, Pitcher, Duff, Scott. *Class II.*—Plummer, Mudge, Collyer, Dyer, Naas, Larmouth, Lorway. *Class III.*—Mooney, Leach, Scammell, Greig, Jones.

ORGANIC CHEMISTRY.

SECOND YEAR.—(*Chemistry Course*).—*Class I.*—Barnes.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—LeRossignol, Adams. *Class II.*—None. *Class III.*—Macfarlane.
Special Examination—Class II.—Klock.

ASSAYING.

FOURTH YEAR.—*Class I.*—Walker. *Class II.*—Russel.

MINERALOGY (*Advanced*).

THIRD YEAR.—(*Chemistry and Mining Courses*).—*Class I.*—LeRossignol. *Class II.*—None. *Class III.*—McGregor Adams, Klock, Kingston, Purves, Macfarlane.

GEOLOGY (*Advanced*).

Class I.—Walker. *Class II.*—Russel.

GEOLOGY.

Class I.—None. *Class II.*—Bolton. *Class III.*—Purves, Tighe, Wainwright.

ZOOLOGY.

Class I.—LeRossignol, MacPhail, Adams, Jackson*, Dawson, Klock. *Class II.* — Herdt, Greenberg, Featherston, Lambert, McFarlane, Stevenson *Class III.*—Bowden.

* Partial.

BOTANY.

SECOND YEAR.—*Class I.*—Barnes.

MATHEMATICS.

FOURTH YEAR.—(*Optional Astronomy.*)—*Class I.* None.—*Class II.*—Bulman.

THIRD YEAR.—*Class I.*—Bolton. *Class II.*—Tighe, Stuart, Copeland. *Class III.*—Wainwright, Murphy (P.).

SECOND YEAR.—Holman, MacPhail, Greenberg, Herdt (L.), Dawson. *Class II.*—Laurie, Murphy (D.). *Class III.*—Herdt (H.), Ryan, Bowden, Rankin, Simpson, Burns, Massey, Featherston (*Suppl. in Analytic Geometry*), Stevenson, Lambert.

FIRST YEAR.—*Class I.*—Whiteside, Duff, Connor, Longworth, Molson, Pitcher. *Class II.*—Dyer, Morris, Scott, Mudge. *Class III.*—Leach, Scammell*, Costigan*, Naas*, Larmonth†, Mooney*, Collyer‡.

* Supplemental in Algebra.
† " " Geometry.
‡ " " Trigonometry.

MECHANICS.

THIRD YEAR.—*Class I.*—LeRossignol. *Class II.*—Warren; Tighe and Wainwright, equal. *Class III.*—Cunningham, Adams, Bolton, Kingston; McGregor and Smith, equal; Stuart, Murphy (P.), Smart.

SECOND YEAR.—*Class I.*—MacPhail, Herdt (H.), Dawson. *Class II.*—Barnes, Bowden; Greenberg and Herdt (L.), equal. *Class III.*—Murphy (D.), Laurie; Burns and Massey and Rankin, equal; Featherston.

EXPERIMENTAL PHYSICS.

THIRD YEAR.—*Class I.*—LeRossignol, Adams, McGregor, Cunningham. *Class II.*—None. *Class III.*—Smith (G. S.), Bolton, Tighe, Warren, Kingston, Copeland, Purves, Wainwright, McFarlane.
(*Special Examination*). *Class III.*—Klock.

SECOND YEAR.—*Class I.*—Barnes, MacPhail. *Class II.*—Holman; Herdt (L.) and Laurie, equal. *Class III.*—Cochrane, Dawson; Herdt (H.) and Rankin, equal; Featherston, Bowden, Burns; Greenberg and Ryan, equal; Stevenson, Murphy (D. A.); Lambert and Massey, equal.

ENGLISH.

THIRD YEAR.—*Class I.*—Adams. *Class II.*—Wainwright.

SECOND YEAR.—*Class I.*—Dawson, Lambert, Greenberg, Barnes.
Class II.—Burns, Murphy; Herdt (L.) and Massey and MacPhail, equal; Gunn and Rankin, equal. *Class III.*—Herdt (H.) and Simpson, equal; Ryan; Bowden and Laurie, equal; Turner; Cochrane and Featherston and Holman, equal; Stevenson.

First Year.—*Class I.*—Pitcher, Molson, Duff, Morris; Longworth and Scott, equal; Whiteside, Plummer, Mudge, Dyer. *Class II.*—Collyer, Finley, Mooney, Naas. *Class III.*—Cochrane and Fairie, equal; Leach; Clark and Larmouth, equal; Lorway.

ENGLISH LITERATURE.

First Year.—*Class I.*—Connor. *Class II.*—None. *Class III.*—Scammell.

FRENCH.

Second Year.—*Class I.*—Herdt (L.), *Class II.*—Herdt (H.), Lambert; MacPhail and Greenberg, equal; Laurie. *Class III.*—Featherston; Bowden and Dawson and Rankin and Ryan, equal; Stevenson, Massey, Simpson.

First Year.—*Class I.*—Molson, Pitcher. *Class II.*—Duff, Scott. *Class III.*—Longworth, Mudge, Mooney, Collyer, Leach.

GERMAN.

Second Year.—*Class I.*—None. *Class II.*—Barnes and Burns, equal. *Class III.*—Holman, Cochrane.

First Year.—*Class I.*—Connor. *Class II.*—Whiteside. *Class III.*—Morris, Lorway, Naas, Larmouth, Dougall.

FACULTY OF COMPARATIVE MEDICINE AND VETERINARY SCIENCE.

PRIZES.

Veterinary Medicine and Surgery—George E. Macaulay.
Anatomy—Thomas E. Simpson.
Disease of Cattle—D. B. Comstock.
Chemistry—J. D. MacIntyre.
Physiology—J. D. MacIntyre.
Histology—Wilfred Plaskett.
Materia Medica—J. D. MacIntyre.
Botany—Wilfred Plaskett.
Zoology—M. C. Wylie.

For the best general examination of all subjects (silver medal)—Sidney S. Twombly.
2nd prize (book)—John A. McCrank.

SPECIAL PRIZES.

For the best essay read before the Veterinary Medical Association;
1st—Sidney S. Twombly, $10.
2nd—David St. Louis, $8.
3rd—J. A. McCrank, $7.

For the best essay read before the Society for the Study of Comparative Psychology (Book)—J. A. McCrank.

FACULTY OF ARTS.

Passed Supplemental Examinations.

SEPTEMBER, 1890.

(*a*) SUPPLEMENTAL SESSIONAL.

THIRD YEAR.—Guthrie, Holden (A. R.)

SECOND YEAR.—Davis, Graham, Jekill, Campbell (R. F.), Ross (J. K.)

FIRST YEAR.– MacVicar (Archd.), McVicar (R.), Macdonald (Jessie).

(*b*) *Supplemental in one Subject.*

SECOND YEAR.—Anderson (J. D.), Blatchford (H.), Brown, Carmichael, Williams (E. J.), Hunt (L. E.), Macdonald (M. L.)

FIRST YEAR.—Donahue, McGerrigle, Munn.

Students of the University.

SESSION 1890–91.

McGILL COLLEGE.

FACULTY OF LAW.

Undergraduates.

FIRST YEAR.

Cameron, J. Alex, B.A.,	Huntingdon, Q.	Hall, Alex. Rives, B.A.,	Toronto, Ont.
Curran, Francis Joseph,	Montreal, Q.	Harwood, Chas. Auguste,	Vaudreuil, Q.
Davidson, Peers, B.A.,	Montreal, Q.	Jacobs, Samuel W.,	Lancaster, Ont.
Geoffrion, Aimé,	Montreal, Q.	Johnson, Alex. Ronald, B.A.,	Montreal, Q.
Glass, Lewis Gordon,	Woodstock, N.B.	Maynard, Etienne,	St Gregoire, Q.
Guerin, John Maguire,	Ottawa, Ont.	Mitchell, V. E.,	Montreal, Q.

SECOND YEAR.

Hutcheson, Robert B.,	Montreal, Q.	Truell, Harry Valorus, B.A.,	Barnston, Q.
Ryan, Percy C.,	Ottawa, Ont.		

THIRD YEAR.

Geoffrion, Victor,	Montreal, Q.	Hibbard, Frederick W., B.A.,	Dublin,
Hatchette, Frank J.,	Montreal, Q.		

OCCASIONAL.

Hersey, Milton L., B.A.Sc., Montreal, Q.
Byres, George Martin, Aberdeen, Scot.
Cromwell, Joseph Miller, Perth, Ont.
Irwin, Henry, County Down, Ireland.
Loomis, Loring R., Manchester, Ia., U.S.A.
Ringland, Joseph, Shanagan, Ireland.
Simpson, J. Cradock, Montreal, Q.
Rankin, James L., Montreal, O.

Graduates following Lectures:

Ambrosse, J. D. L., B.C.L.
Brown, A. J., B.A., B.C.L.
Budden, H. A., B.A., B.C.L.
Claxton, J. G. B., B.C.L.
Cross, S., B.C.L.
Dunton, R. A., B.C.L.
Ferguson, J. M., B.C.L.
Fry, H., B.C.L.
Goldstein, M., B.C.L.
Nicolls, A. D., B.C.L.
Rielle, N. T., B.A., B.C.L.
Robertson, A., B.A.
Sharpe, W. P., B.C.L.

FACULTY OF MEDICINE.

Alexander, W. W., Stanhope, P.E.I.
Akerly, A. W. K., Fredericton, N.B.
Ault, C. R., Tilsonburg, O.
Aylen, E. D., Aylmer, Q.

Barrett, H. H., Three Rivers, Q.
Bazin, A. T., Montreal, Q.
Beaman, W. H., Montreal, Q.
Beers, A. H., Montreal, Q.
Bennie, Robt., Riverfield, Q.
Berwick, G. A., Farnham, Q.
Berwick, R. H., Montreal, Q.
Binmore, J. E., Montreal, Q.
Blunt, H. W., Montreal, Q.
Bostwick, W. E., Detroit, Mich.
Bowen, G. A., Compton, Q.
Bowie, R. A., Brockville, O.
Boyce, B. F., Norham, O.
Brouse, J. E., Brockville, O.
Brousseau, J. A., Ottawa, O.
Brown, E. R., Montreal, Q.
Brown, F. W. A., Brockville, O.
Brown, George T., Cantley, Q.
Brown, W. A., Chestervill-, O.
Brown, W. C., Heckston, O.
Brown, J. A., Sarnia, O.
Bruce, D. A., Grand View, P.E.I.
Brunette, J. T., Cornwall, O.
Busby, John, St. Vincent de Paul, Q.
Byers, W. G. M., Gananoque, O.

Calkin, B. H., Kentville, N.S.
Cameron, J. D., L'Orignal, O.
Campbell, Robt., Laggan, O.
Campbell, R. M., Montreal, Q.
Carlaw, C. M., Campbellford, O.
Carmichael, H. B. W., Montreal Q.
Carroll, R. W., Stratford, Q.
Chabot, J. L., Ottawa, O.
Chipman, R. J., Halifax, N.S.
Clark, John, Troy, O.
Clemesha, J. C., Port Hope, O.
Coburn, A. D., Keswick Ridge, N.B.
Cooper, M. A., Ormstown, Q.
Conner, W., Minneapolis, Minn.
Crocket, A. P., Fredericton, N.B.

Davidson, Allan, Burns, O.
Davis, R. E., Fallowfield, O.
Day, A. R., Guelph, O.
Day, W. L., Montreal, Q.
Dicks, W. E., North Williamsburg, O.
Dewar, A., Ormond, O.
Dewar, A. T., Sarnia, O.
Drysdale, W. F., Perth, O.
Duncan, George H., Russell, O.
DuVernet, E., Gagetown, N.B.

Ellis W. L., St. John, N.B.
Esty, A. S., Keswick Ridge, N.B.
Evans, J. W., Chelsea, Q.

Farwell, W. A., Lennoxville, Q.
Ferguson, W., Picton, N.S.
Feron, F. M., Montreal, Q.
Fleming, G. W., Chipman, N.B.
Fletcher, R. W., Mabbtown, N.S.
Flinn, J. W., Wallace, N.S.
Fowler, E. S., Perth, O.
Fry, F. M., Montreal, Q.
Fulton, C., Avonmore, O.
Fulton, J. A., Franklin Centre, Q.

Gibson, R. J., Clinton, O.
Gilman, F. M., Tusket, N.S.
Girdlestone, C. W., Winnipeg, Man.
Glendenning, R. T., Truemanville, N.S.
Goff, H. N., Woodmill, P.E.I.
Goltman, A., Montreal, Q.
Gorrell, C. W. F., Brockville, O.

Grafton, E. A., Montreal, Q.
Graham, W. C. R., Prescott, O.
Grant, H. A., Pembroke, O.
Grey, Arthur, Durham, O.
Gunter, F. B., Fredericton, N.B.

Haight, M., New Durham, O.
Hall, M. K., Franklin Centre, Q.
Halliday, V., Peterboro', O.
Hamilton, Gavin, Bright, O.
Hamilton, W. F., Peterborough, O.
Hamilton, W. F., Sackville, N.B.
Hannington, J. P., Shediac, N.B.
Harrison, J. D., Fredericton, N.B.
Hart, P. C., Baddeck, N.B.
Hattie, W. H., New Glasgow, N.S.
Hayes, Joseph, Nelson, N.B.
Henderson, J. A., Orangeville, O.
Henderson, James, Warkworth, O.
Henderson, W., Dickinson, O.
Hepburn, C., Montreal, Q.
Hewetson, John, Riverside, Cal.
Hewetson, S. W., Georgetown, O.
Hogg, D. H., Winnipeg, Man.
Holden, D. B., Montreal, Q.
Holohan, P. A., Newcastle, N.B.

Internoscia, A., Montreal, Q.
Irving, Ed., Pembroke, O.
Irwin, H., Pembroke, O.

Jack, DuVernet, Fredericton, N.B.
Jacques, H. M., Upper Dyke, N.S.
Jakes, R. W., Merrickville, O.
Jameson, Thomas, Rochester, N.Y.
Jamieson, W. H., Montreal, Q.
Johnston, Albert, Ottawa, O.

Kearns, J. F., Metcalfe, O.
Keir, E. J., Malpeque, P.E.I.
Kelly, C. I., West Flamborough, O.
King, H. S., Sarnia, O.
Kinghorn, H. M., Montreal, Q.

Lambert, E. M., Ottawa, O.
Lambly, W. O., Montreal, Q.
Lang, F. W., St. Marys, O.
Langley, A. F., Victoria, B.C.
Lanterman, M., Montreal, Q.
Lawrence, J. W., Lower Dumfries, N.B.
Lewis, J. T., Hillsboro, N.B.
Lindsay, Wm., St. Mary's, O.
Lineham, D. M., Newry, O.
Livingstone, H. A., Montreal, Q.
Lochead, John, Parkhill, Ont.
Love, Andrew, New Glasgow, N.S.
Lovering, W. T., Seattle, W.T.

MacCarthy, G. S., Ottawa, O.
Mackay, D. T., Clifton, P.E.I.
Mackay, R. B., Toronto, O.
MacKenzie, Alex., Smith's Falls, O.
MacLean, C. M., Cambridge, N.B.
MacPhail, J. A., Orwell, P.E.I.
Macrae, G. B., Montreal, Q.
Mader, A. I., Lunenburg, N.S.
Main, C. G., Woodstock, N.B.
Mair, A. W., Clinton, O.
Manchester, G. H., Ottawa, O.
Martin, C. F., Montreal, Q.
Martin, M. McL., Brown's Creek, P.E.I.
Martin, S. H., Savage Mines, Q.
Massiah, W. B. H., Barbados, W. Indies.
Masten, C. H., Montreal, Q.
Matheson, R., Cardigan, P.E.I.
Mathewson, G. H., Montreal, Q.
McArthur, A. D., Kenmore, O.
McCann, A. E. A., Montreal, Q.
McCrea, James, Laggan, O
McCrimmon, A. A., St. Thomas, O.
McGinnis, D., Athelstan, Q.
McGuire, J. C., Trenton, O.
McIntosh, L. Y., Strathmore, O.
McKenty, J. E., Montreal, Q.
McKenzie, R. T., Almonte, O.
McKenzie, R. J., Melbourne, Q.
McKenzie, S. R., Montreal, Q.
McKinnon, A. J., Kinross, P.E.I.
McLaren, J. T., Belle Creek, P.E.I.
McLaughlin, J. A., Avonmore, O.
McLennan, D. A., Fournier, O.
McLennan, K., Dunvegan, O.
McMillan, J. H., Pictou, N.S.
McMillian, W., Alberry Plains, P.E.I.
McMorine, R. F., Richmond, Q.
McNally, H. H., Fredericton, N.B.
Meade, C. J., St. Paul, Minn.
Meikle, R. H., Lachute, Q.
Meikle, W. F., Morrisburg, O.
Mills, W. C., Montreal, Q.
Mitchell, W., Lachute, Q.
Montgomery, T. E., Phillipsburg, Q.
Moore, J. M., Belleville, O.
Morris, Frank, Fairville, N.B.
Morrow, W. S., Halifax, N.S.

Neill, John, Aylmer, Q.
Nicholls, A. G., Montreal, Q.

Ogden, C. L., Warrensburg, N.Y.
O'Sullivan, P. J., South Boston, Mass.
Outwater, S. W., Plainfield, O.

Parke, George H., Quebec, Q.
Parker, G. W., Cardigan, P.E.I.
Paterson, L., Harbour Grace, Nfld.
Patterson, W., New Glasgow, N.S.

Peake, J. P., Fredericton, N.B.
Phelan, E. D., Montreal, Q.
Phillmore, R. H., Cookshire, Q.
Pritchard, James, North Wakefield, O.
Purvis, H., Portage du Fort, Q.

Quirk, E. McG., Mile End, Q.

Rice, T. A. G., Montreal, Q.
Richardson, A., South March, O.
Richardson, A. J., Chesterville, O.
Riley, E. R., Charlottetown, P.E.I.
Rimers, F. E., Bryson, Q.
Robertson, A. A., Montreal, Q.
Robertson, E. A., Lennoxville, Q.
Robertson, T. F., Brockville, O.
Robinson, B. E., Orillia, O.
Robinson, H. J., Brockville, O.
Rodger, D. A., Genoa, Q.
Rogers, Wm., Montreal, Q.
Rorke, R. F., St. Thomas, O.
Ross, D. W., Grand Falls, N.B.
Ross, Hugh, Thorburn, O.
Ross, J. J., Dewittville, Q.

Scammell, J. H., St. John, N.B.
Scane, J. W., Chatham, O.
Scott, W. H., Owen Sound, O.
Seaton J. S., St. John, N.B
Seguin, J. W. A., Rigaud, Q.
Semple, E. J., Montreal, Q.
Sharpe, E. M., Butternut Ridge, N.B.
Shaw, G. F., Ottawa, O.
Shaw, H. S., Montreal, Q.
Shaw, T. P., Montreal, Q.
Shirriff, Geo. R., Huntington, Q.
Shillington, A. T., Kemptville, O.
Sinclair, O. W., Bridgetown, N.B.
Smith, C. F., Winchester, O.
Smith, R. A., Durham, O.
Smith, T. H., North Sydney, C.B.
Smith, W. H., Winnipeg, Man.
Sparling, A. J, Pembroke, O.
Spier, J. R., Lindsay, O.
Stearns, C. N., Montreal, Q.
Stenning, W. A., Coaticook, Q.
Summers, A. A., Aultsville, O.
Sutherland J. A., River John, N.S.
Symons, J. H., Montreal, Q.

Taplin, M. M., Addison, O.
Taylor, J. N., Ottawa, O.
Taylor, T. T., Chatham, O.
Thompson, John, Moulinette, O.
Tompkins, J. F. C., Coaticook, Q.
Travers, J. B., St. John, N.B.
Tremblay, L., Ottawa, O.
Trenholme, G. A., Coaticook, Q.
Troy, James, Fallowfield, O.
Troy, W., Fallowfield, O.
Tunstall, C. A., Montreal, Q.

Wade, A. S., Perth, O.
Walker, J. L., Montreal, Q.
Walker, G. W., Stratford, O.
Walsh, A. W., Huntingdon, Q.
Walsh, T. N., Ormstown, Q.
Walsh, W. E., Ormstown, Q.
Wasson, H. J., Peterboro', O.
Watson, N. M., Williamstown, O.
Watson, R. L, Montreal, Q.
Webster, R. E, Brockville, O.
Whyte, J. T., Ottawa, O.
Williamson, W. P., Chatham, O.
Wilson, R. D., Derby, N.B.
Wilson, Robert, Montreal Q.
Wolf, C. G. L., Winnipeg, Man.

Yates, H. B., Brantford, O.
Yearwood, C., Barbados, West Indies.
York, H E., Metcalfe, O.

FACULTY OF ARTS.

Undergraduates.

FIRST YEAR.

Name.	*School.*	*Residence.*
Adams, J. P.,	N. B. Normal School,	Campbelltown, N B
Bailey, W. G.,	Private tuition,	Montreal, Q
Barlow, Walter L.,	M. H. S.,	Montreal, Q
Bickerdike, F. A. C.,	Private tuition,	Montreal, Q
Blackett, John,	Huntingdon Acad.,	Ormstown, Q
Bond, Wm. L.,	M. H. S.,	Montreal, Q
Boyd, Leslie H.,	M. H. S.,	Montreal, Q
Boyd, Robert,	Ottawa Coll. Inst.	Russell, O
Bremner, William,	Ottawa Collegiate Institute,	Ottawa, O

Campbell, Duncan A.,	Glencoe,	Kilmartin, O
Campbell, G. Ernest,	Huntingdon Academy,	Ormstown, Q
Church, Athole,	St. John's School,	Montreal, Q
Cleland, J. A.,	Private tuition,	Montreal, Q
Craig, Wm. W.,	M. H. S.	Montreal, Q
Dickson, Ed. H. T.,	Private tuition,	Trenholmeville, Q
Dickson, Sydney M.,	St. Francis College,	Trenholmeville, Q
Davis, David T.,	M. H. S.,	Montreal, Q
Day, Frank J.,	Private tuition,	Belleville, O
Duclos, Arnold Wm.,	M. H. S.,	Montreal, Q
Elliott, Alexander,	McGill Normal School,	Shawville, Q
Fraser, Frank C.,	M. H. S.,	Montreal, Q
Gillies, Robert J.,	Huntingdon Academy,	Kelso, Q
Graham, Angus,	Glencoe H. S.,	Glencoe, O
Graham, Fred. H.,	Liverpool College,	Iron Hill, Q
Hanran Robt. J.,	Inverness Academy,	Inverness, Q
Harvey, Fred W.,	Sutton Model School,	Abercorn, Q
Hopkins, M. C.,	McGill Normal School,	Coaticook, Q
Howell, Wm.,	St. John's School,	Montreal, Q
Lambly, M. O.,	Wesleyan Theological College,	Inverness, Q
Lewis, Wm. P.,	St. John's H. S.,	Iberville, Q
Lyster, Norton C.,	St. Francis College,	Richmond, Q
McGregor, Alexander,	Lachute Academy,	St. Andrews, Q
McMullin, John,	Huntingdon Academy,	Ormstown, Q
Macpherson, Walter,	M. H. S.,	Montreal, Q
Naylor, Henry A.,	Shawville Academy,	Shawville, Q
Ogilvy, Charles,	M. H. S.,	Montreal, Q
Rodger, Thomas,	M. H. S.,	Montreal, Q
Shaw, Christie M.,	M. H. S.,	Montreal, Q
Spearman, Fred. S.,	Huntingdon Academy,	
Smith, Alistair,	Petitcodiac School,	Petitcodiac, N.B
Stewart, J. C.,	London Coll. Inst.,	Embro, O
Vipond, Charles W.,	M. H. S.,	Montreal, Q

SECOND YEAR.

Brown, Cecil L.,	Huntingdon Academy,	Port Lewis, Q
Brown, James,	Huntingdon Academy,	Huntingdon, Q
Donahue, Wm.,	M. H. S.,	Montreal, Q
Gordon, John S.,	Prince of Wales College, P.E.I.,	Alberton, P.E.I
Grisbrook, E.,	Private tuition,	Dundee Q
Gurd, Charles C.,	M. H. S.,	Montreal, Q
Hickson, J. W. A.,	Eliock School, Montreal,	Montreal, Q
Honeyman H. A.,	Stanstead Wesleyan College,	Knowlton, Q
Hutchison, David,	Private tuition,	Brechin, O
Internoscia, Jérome,	Technical Institute, Italy.	Montreal, Q
Ireland, George D.,	Prince of Wales College, P.E.I.,	Alberton, P.E.I
Jordan, John E.,	Coaticook Academy,	Coaticook, Q
Killaly, H. N.,	Trinity College School, Port Hope,	Morrisburg, O
McIver, Evander J.,	M. H. S.,	Montreal, Q
McGerrigle, J. A.,	Huntingdon Academy,	Ormstown, Q
MacVicar, Robert M.,	Eliock School, Montreal,	Montreal, Q
McVicar, Archibald,	Strathroy Collegiate Institute,	Strathroy, O
Mahaffy, Albert,	H. S., Goderich,	Port Albert, O
Mansur, Charles,	Stanstead Wesleyan College,	Stanstead, Q
Muir, Peter P.,	Harrison H. S.,	Fordwich, O
Munn, Stewart M.,	M. H. S.,	Montreal, Q
Patterson, William,	Ottawa Collegiate Institute	Caultley, Q
Pratt, Francis,	Magee College, Ireland,	Montreal, Q
Robertson, Albert J.,	Weston H. S.,	Woodbridge, O

Skeels, Albie A.,	H. S., Montreal,	Montreal, Q
Smith, E. F. McL.,	H. S., Hawkesbury,	Hawkesbury, Q
Thompson, James,	Lachute Academy,	Bristol, Q
Townsend, Wm. McN.,	Prince of Wales Coll., P.E.I.,	Traveller's Rest, P.E.I

THIRD YEAR.

Allen, James H.,	West Osgoode, O	Kollmyer, W. Hector,	Montreal, Q
Anderson, John D.,	Tiverton, O	Mackenzie, Ewen A.,	Lucknow, O
Archibald, Edward,	Montreal, Q	McLennan, Kenneth,	Alexandria, O
Barron, Robt. H.,	Lachute, Q	Messenger, Wm. John,	Navario, Cal., U.S
Blachford, Henry,	Huntingdon, Q	Mitchell, Robt. J. W.,	Montreal, Q
Brown, Daniel,	Morris Flats, Q	Parker, Edwin G.,	Martinville, Q
Carmichael, S.,	Montreal, Q	Pritchard, Wm. P.,	Redgrave, O
Colquhoun, Philip,	Colquhorm, O	Reeves, Archibald C.,	Ormstown, Q
Cushing, Harold B.,	Montreal, Q	Robins, Geo. D.,	Montreal, Q
Davey, R George,	Whitby, O	Ross, Robert O.,	Margaree, C.B
Drum, Lorne,	Quebec, Q	Sadler, Thomas A.,	Dewittville, Q
Ellicott, T. W. H.,	Montreal, Q	Smyth, Walter H.,	Montreal, Q
Graham, Goorge D.,	Ottawa, O	Taylor, James,	Ottawa, O
Hamilton, Dan. S.,	Ravenswood, O	Williams, Edward J.,	Montreal, Q
Jaquays, H. M.,	Sutton, Q	Wood, Arthur B.,	St. Johns, Q
Jekill, Henry,	Morris Flats, Q		

FOURTH YEAR.

Cole, Arthur A.,	Montreal, Q	McGregor, John M.,	Montreal, Q
Craik, Galen,	Rockburn, Q	McLeay, Alfred A.,	Danville, Q
Dobson, John R.,	Pictou, N.S	McLeod, Norman A. D.,	Lochside, N.S
Ellenwood, Wm. R.,	Yarmouth, N.S	Moore, Levi,	Lachute, Q
Goff, Harry N.,	Georgetown, P E.I.	Oliver, William,	Rockburn, Q
Gunn, Wm. Thos.,	Montreal, Q	Pidgeon, G. C.,	New Richmond, Q
Guthrie, Donald,	Guelph, O	Russell, Andrew,	Bristol, Q
Hall, Richard S.,	Montreal, Q	Tees, John,	Montreal, Q
Hipp, E. G.,	Montreal, Q	Warne, James F.,	Eastman, Q
Holden, Arthur R.,	Montreal, Q	Warne, Wm. A.,	Eastman, Q
LeRossignol, W. J.,	Montreal, Q	Whyte, George,	Leeds Village, Q
McCullough, Robt.,	Inverness, Q	Whyte, James T.,	Manotick, O
McDougall, G. W.,	Montreal, Q	Young, Henry C.,	North Troy, Vt., U.S

B. A.

Elliott, James,	Matthewson, George H.
McDougall, Robert,	

B. AP. SC.

Antliff, T. H.,	Ferrier, W. F.

Partial and Occasional.

A *Partial Student* (indicated by an asterisk) may, without passing the Entrance Examination, take the same classes as an Undergraduate, and must take at least three classes. Undergraduates and Partials are Matriculated Students. An *Occasional Student* takes less than three classes.

FIRST YEAR.

*Adams, J. R.,		*Cameron, Malcolm J.,	Cowansville, Q
*Armstrong, H. S.,		Chantler, W. N.,	West Assa
Baker, Edwin,	Brandon, Man	*Cleland, John A.,	Montreal, Q
Beauchamp, P.,	Grenville, Q	*Donaldson, David,	Montreal, Q
*Bessette, Wilfrid,	Mount Johnson, Q	Dougall, Wilfrid,	Montreal, Q
*Blunt, F. H.,	Knowlton, Q	Gilman, —	
*Burke, Thomas E.,	Farran's Point, O	*Gilmour, W. F.,	Almonte, O

Giroulx, Louis R.,	Duclos, Q	Procter, Arthur A.,	Alberin, B.C
*Jackson, Wm. P.,	Kingston, O	Ridgeway, A. G.,	
Kerr, Wesley E.,	Brussels, O	Robinson, Alex.,	Portarlington, Ire
McCuaig, Wm.,		Rodger, Thomas J.,	Montreal, Q
*McDonald, A.,	Melbourne, Q	*Rollit, Charles D.,	Montreal, Q
*MacInnes, John P.,	Vankleek Hill, O	Sauvé, Albert,	
MacIntosh, —		Savignac, J. A.,	Tulleride, Col., U.S
*MacKinley, George,	Seaforth, O	Scott, Thomas,	Monkton, O
McLaren, N.,	Chicoutimi, Q	Sincennes, Jean,	Duclos, O
*McLean, N.,	Bolsover, O	*Stewart, George,	Elmside, Q
Martin, David E.,	Bothwell, O	Stewart, J. C.,	Embro, O
Matthewson, G. H., B.A.,		*Stoney, C.,	Hamilton, O
Maynard, J. L.,	Ste. Brigide, Q	*Strong, John J,	Cambria, Q
*Mervyn, W. A. A.,		*Sutherland W. C.,	Woodstock, O
*Messenger, Charles,		*Truax, Judson,	Ruthven, O
Moodie, Kenneth,	Chesterville	*Vaughan, Charles S.,	Mystic, Q
Newton, John,		Waller, Charles C.,	England
*Ogilvy, Charles,		*Waterson, Wm. J.,	Vankleek Hill, Q
Orr, W. J.,		Warnicker, John B.,	Montreal, Q
*Phelps, Stuart E.,	Montreal, Q	Wotherspoon, C.,	Montreal, Q

SECOND YEAR.

*Adams, Robert,	Sarnia, O	Jones, A. T.,	Shropshire, Eng
*Aikenhead, J. P.,	Toronto, O	Lee, Herbert,	Toronto, O
*Ballantyne, R.,	Dunbar, O	*Logan, Alfred,	
*Barnby, R. H.,	Lucknow, O	*Massicotte, Leopold,	Montreal, Q
Barnes, H. J.,	Montreal, Q	*McArthur, John H.,	Kilbride, Q
*Beattie, W. E.,	Guelph, O	*MacKeracher, W. M.,	Montreal, Q
Bethell, T. G.,	Mascouch Rapids	Morrison, W. T.,	Ormstown, Q
*Burnett, Herbert W.,	Toronto, O	*Page, Arthur,	Montreal, Q
Cassidy, T. C.,	Pointe aux Trembles, Q	*Reed, George E.,	
Cleary, I. R.,	Montreal, Q	Robinson, Frederick G.,	Glen Tay, O
*Clendinnen, George S.,	Ottawa, O	Rondeau, Samuel.	Montreal, Q
*Elliott, Alexander,	Shawville, Q	*Sanderson, A. E.,	
*Ewan, R. B,	Montreal, Q	Sauvé, J. Alfred,	Hull, Q
Fraser, Frank C.,	Montreal, Q	Scott, P.,	
Frew, Robert,	Glasgow, Scot	Walker, H.,	Sheffield, Eng
Huxtable, Charles,	Kemptville, O	Westgate, C. R.,	Montreal, Q
Jackson, J. H.,	Toronto, O	Wilkinson, Thos. J.,	New Glasgow, Q

THIRD YEAR.

*Eadie, Robert E.,	Sherbrooke, Q	Robertson, A.,	Quebec, Q
Manchester, G. H.,		Ferguson, A. H.,	Montreal, Q
Murray, Jas. Holt,	Glen Willow, O	Jackson, Fred. S.,	

FOURTH YEAR.

Flagg, Edwin L.,	Morrisburg, O	McLeod, John Wm.,	
*Fraser, A. D.,		*Morrison, John,	Mandamin
Hausen, Joseph T.,	Montreal, Q	*Tener, Richard,	Montreal, Q
McGregor, Peter,	Ashdid, O		

DONALDA DEPARTMENT.

SPECIAL COURSE FOR WOMEN.

Undergraduates.

FIRST YEAR.

Name.	*School.*	*Residence.*
Brown, Jessie,	Mrs. Lay's School,	Montreal, Q
Craig, Margaret,	Girl's High School,	Montreal, Q
Gyde, Lilian N.,	McGill Normal School,	Montreal, Q

Hargrave, Edith,	Sherbooke Girls' Academy,	Sherbrooke, Q
Mackenize, Jane E. F.,	St. Francis College,	Richmond, Q
Murphy, M. Grace,	Private tuition,	Montreal, Q
Ogilvy, Isabella,	G. H. S., Montreal,	Montreal, Q
Parmelee, J. M.,	McGill Normal School,	Waterloo, Q
Radford, Ethel S.	G. H. S., Montreal,	Montreal, Q
Shaw, S. Louise,	G. H. S., Montreal,	Montreal, Q
Solomon, Jennifried P.,	Waterloo Academy,	Rochelle, Q
Seymon, Clara,	Private tuition,	Montreal, Q
Stenning, Annie A.,	Coaticook Academy,	Coaticook, Q
Warner, Agnes L.,	G. H. S., St. John, N.B.,	St. John, N.B

SECOND YEAR.

Ballantyne, Jessie,	G. H. S., Montreal,	Montreal, Q
Brittain, Isabel J.,	G. H. S., Montreal,	Montreal, Q
Fairclough, Lizzie M.,	Hamilton Collegiate Institute,	Hamilton, O
Jackson, Annie,	Misses Symmers and Smith,	Montreal, Q
James, Agnes S.,	McGill Normal School, Montreal,	Montreal, Q
Lee, Mabel,	H. S., Quebec,	Quebec, Q
LeRossignol, Mary,	G. H. S., Montreal,	Montreal, Q
Macdonald, Jessie H.,	Private tuition,	Montreal, Q
McCoy, Emma C.,	Huntingdon Academy, Q.,	Rockburn, Q
Millar, Edith N.,	McGill Normal School,	Montreal, Q
Reay, Janet,	McGill Normal School,	Melbourne, Q
Seymour, Martha,	Mrs. Lay's School,	Montreal, Q
Smardon, Charlotte,	McGill Normal School,	Three Rivers, Q
Wilson, Kate,	McGill Normal School,	Montreal, Q

THIRD YEAR.

Angus, Frances R.,	Montreal, Q	MacDonald, Minnie L.,	Montreal, Q
Campbell, Kate M.,	Montreal, Q	Mewhort, Louise.	St. Anne, Q
Campbell, R. F.,	Montreal, Q	Pitcher, Ethelwyn,	Montreal, Q
Davidson, Clara F. M.,	Frelighsburg, Q	Raynes, Ethel,	Montreal, Q
Leach, Milda,	Montreal, Q	Ross, Jessie K.,	Montreal, Q
Lyman, Helen W.,	Montreal, Q	Tatley, Eleanor,	Montreal, Q

FOURTH YEAR.

Hall, Elizabeth,	Montreal, Q	Pattison, Mary L.,	Clarenceville, Q
McGregor, E. B.,	Montreal, Q	Robins, Lilian B.,	Montreal, Q
McMillan, Helen,	Montreal, Q	Smith, G. Louise,	Montreal, Q
Moffat, Eva L.,	Gananoque, O		

B. A.

Derrick, Carrie M.,	Reid, Helen R. K.,
Hunter, Georgiana,	Scott, Sara B.,
Macfarlane, Mira,	Williams, Annie,
Murray, Alice,	

Partial and Occasional.

FIRST YEAR.

Bremner, Jennie,	Montreal, Q	McLea, Jeanie,	Montreal, Q
Campbell, Agnes,	Longueuil, Q	*Mills, Jeanie,	Montreal, Q
*Clendinneng, Edith H.,	Montreal, Q	Nash, Eleanor A.,	Montreal, Q
Evans, Lilian N.,	Montreal, Q	Nichols, Alice,	Montreal, Q
Evans, Mabel Norton,	Montreal, Q	*Rickey, Eleanor,	Montreal, Q
Hopkins, Gertrude F.,	Cookshire, Q	Sanderson, Minnie,	Montreal, Q
Irwin, Isa,	Lachine, Q	Simms, F.,	Montreal, Q
Lindsay, Violet,	Montreal, Q		

SECOND YEAR.

Calder, Bertha,	Lancaster, O	Ewing, Caroline,	Montreal, Q
Campbell, Amelia,	Montreal, Q	Ferguson, Isabelle,	St. Anicet, Q
Campbell, E. M.,	Montreal, Q	Hendrie, Lilian M., Cote	St. Antoine, Q
Cumming, A. C. H.,	Montreal, Q	Howell, Jessie C.,	Montreal, Q
Darling, Grace,	Montreal, Q	Mann, Eva.	Montreal, Q
Darling, Mary I.,	Montreal, Q	McLea, P. E.,	Montreal, Q
Davidson, Christina,	Montreal, Q	Mills, Janet A.,	Montreal, Q
Dawson, Mary,	Montreal, Q	Reid, Ethel H.,	Montreal, Q
Douglas, F.,	Montreal, Q	Rodger, Jemima,	Montreal, Q
Evans, Emma E.,	Montreal, Q	Seymour, Julia L.,	Montreal, Q
Ewing, Anna L.,	Montreal, Q	Walker, Bertha P.,	Montreal, Q

THIRD YEAR.

Blachford, Agnes C,	Montreal, Q	Johnson, N.,	Montreal, Q
Blackader, Alice,	Montreal, Q	LeRossignol, Annie,	Montreal, Q
Blackader, Helen B.,	Montreal, Q	Mattice, Brenda T.,	Montreal, Q
Dawson, Hilda,	Montreal, Q	Monk, Isa M.,	Montreal, Q
Fry, Mary D.,	Montreal, Q	Mussen, Ethel,	Montreal, Q
Finley, Marie S.,	Montreal, Q	Radford, Annie,	Montreal, Q
*Hunt, Lovisa,	Montreal, Q	Trenholme, Florence, Cote	St. Antoine

FOURTH YEAR.

Ames, L. M.,	Montreal, Q	Skelton, A. R.,	Montreal, Q
Darey, H. A.,	Montreal, Q	Turner, Edith,	Montreal, Q

MORRIN COLLEGE, QUEBEC.

Undergraduates.

Brodie, Alexander,	Quebec, Q	Lee, Emily,	Quebec, Q
Brown, Martha L.,	Quebec, Q	Lindsay, John,	Danville, Q
Chambers, E. T. C.,	Granby, Q	Macadam, Maggie,	Glasgow, Scot
Fraser, Ethel,	Quebec, Q	Moffatt, David S.,	Inverness, Q
Gale, Ethel,	Quebec, Q	Polley, James F.,	St. Stephen, N.B
Harper, Robert M.,	Quebec, Q	Tanner, John U. E. F.,	Levis, Q

ST. FRANCIS COLLEGE, RICHMOND.

Undergraduates.

Candlish, Charles W.,	L'Avenir, Q	Hewitt, Edith,	Melbourne, Q
Coburn, David N.,	Melbourne, Q	Lufkin, Elizabeth J.,	Waterloo, Q
Dunkerley, Cora F.,	Ulverton, Q	Lyster, H. F.,	Richmond, Q
Fraser, Hortense C.,	Richmond, Q	Prendergast, A. R.	Richmond, Q
Fraser, H. A.,	Richmond, Q		

Occasional Students.

Church James E.,	South Durham, Q	Macleay, Kenneth L.,	Danville, Q
Elliott, Albert J.,	Ulverton, Q	Prout, John W. C.,	Leeds, Q
Jamieson, Minetta A.,	Richmond, Q	Ryan, William Arthur,	Richmond, Q

STANSTEAD WESLEYAN COLLEGE.

McDuffee, Mamie,	Stanstead, Q

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

Clark, William Barton, Cote St. Paul, Q
Cochrane, Kenn. Cameron, Brockville, O
Collyer, Alfred, Sussex, Eng
Connor, Matthew Francis, Ottawa, O
Duff, William Archibald, Montreal, Q
Dyer, Leonard William E., Montreal, Q
Fairie, James Arthur, Montreal, Q
Finley, Samuel Arnold, Montreal, Q
Larmonth, John Herbert, Ottawa, O
Leach, William Wilson, Montreal, Q
Longworth, Chas. Henry B., Charlottetown, P.E.I
Lorway, John Muir, Sydney, C B
Molson, Herbert, Montreal, Q
Mooney, Henry Seward, Montreal, Q
Morris, John William, Wallace, N.S
Mudge, Arthur Langley, Montreal, Q
Naas, Robert David, Luenburg, O
Pitcher, Frank Henry, Montreal, Q
Plummer, Thomas Henry, Toronto, O
Scannell, John Kimball, St. John, N.B
Scott, Walter Moffat, Charlottetown, P.E.I
Sheraton, Robert Leonard, Halifax, N.S
Thomas, Chas. Fred. W., Lyster Co., Meg
Toller, Guy Northcote, Ottawa, O
Whiteside, Ortin Edw. S., Metcalfe, O

SECOND YEAR.

Barnes, Howard Turner, Montreal, Q
Bowden, William Arthur, Richmond, Q
Burns, John Andrew, Montreal, Q
Cochrane, John Dougall, Montreal, Q
Darling, Edward, Montreal, Q
Dawson, Alex. Scott, Pictou, N.S
Featherston, John Hamilton, Montreal, Q
Greenberg, Louis, Montreal, Q
Gunn, Robert A., Montreal, Q
Herdt, Henri, Montreal, Q
Herdt, Louis, Montreal, Q
Holman, Robt Claude, Summerside, PEI
Lambert, Frank, Woodstock, N.S
Lawrie, William Pitt, Quebec, Q
MacPhail, James Alex., Orwell, P.E.I
Massey, Arthur W. K., Montreal, Q
Murphy, David A., Montreal, Q
Rankine, John R., Montreal, Q
Ryan, Arnold Jas., Rouse's Point, N.Y
Simpson, Lincoln, Cavendish, P.E.I
Stevenson, Jas. Albert, South Granby Q
Turner, John Alexander, Hamilton, O

THIRD YEAR.

Adams, Walter Chamblet, Montreal, Q
Bolton, Ellsworth, Listowel, O
Copeland, Louis Benjamin, Berthier, Q
Cunningham, Wm. Norton, Montreal, Q
Kingston, Charles B., Montreal, Q
Klock, Alonzo, Aylmer, Q
LeRossignol, Peter Henry, Montreal, Q
Murphy, Peter Joseph, Quebec, Q
McFarlane, Walter Douglas, Cote St. Antoine, Q
McGregor, John Murray, Montreal, Q
Purves, James G., Sydney, C.B
Smart, W. C. Gregory, Hamilton, O
Smith, George Sinclair, Petitcodiac, N.B
Stuart, Henry B., Montreal, Q
Tighe, James, Holyoke, Mass
Wainwright, James George G., St. Andrews, Q
Warren, Wm. Henry, Montreal, Q

FOURTH YEAR.

Bickerdike, Robert, Montreal, Q
Bulman, William Jardine, Montreal, Q
Middleton, Percy Howe, Montreal, Q
McTaggart, Duncan Douald, Montreal, Q
Ramsay, Hy. Martyn, Cote St. Antoine, Q
Russel, Hugh Yelverton, Montreal, Q
Schwitzer, John Edward, Ottawa, O
Stone, Ernest Albert, Montreal, Q
Walker, Wm. Henry H., Montreal, Q
Williams, Miles Lawrence, Montreal, Q
Wingham, Thomas Henry, Montreal, Q

Partial Students.

Costigan, —,
Goulet, Albert, Aylmer, Q
Greig, Alexander Rodger, Montreal, Q
Jackson, F. S., Montreal, Q
Jones, Charles Hugh, Montreal, Q
Loeb, Alfred A., Montreal, Q
Moodie, Kenneth, Montreal, Q
Pink, Lawrence Nasmith, Pembroke, O
Rutherford, Forrest, Cote St Antoine, Q
Saunderson, Ernest, Montreal, Q

FACULTY OF COMPARATIVE MEDICINE AND VETERINARY SCIENCE.

Andrews, F.		McIntyre, J. D.,	
Barton, F.,	Lennoxville, Q.	Moffett, J. W.,	Kingfisher, I T., U.S.
Bolger, D. L.,	Cambridge, Mass., U.S.	Moffatt, S. J.,	Ormstown, Q.
Brainerd, E.		Miller, G. A.,	Granby, Q.
Brodie, H.,	Montreal, Q.	Orr, O. G.,	
Casper, A. M.,		Paterson, J. H.,	
Campbell, J. G.,		Pennrick, C. F.,	
Cleaves, A. S.,		Perley, H. S.,	Ottawa, O.
Coakley, D.,		Plaskett, J.,	Montreal, Q.
Comstock, D. B.,	Miles City, Mont., U.S.	Plaskett, W. S.,	
Denny, H. E.,		Pote, T.,	New Harmony, Ind., U.S.
Dunton, H. B.,	Richmond, Q.	Rathbone, J. L.,	
Dyer, R. E.,	Boston, Mass., U.S.	Robb, E. M.,	Montreal, Q.
Ewing, J. A.,	Montreal, Q.	Robertson, A. T.,	Howick, Q.
Gangloff, G. E.,	Buffalo, N.Y., U.S.	Seale, J. H.,	Granby, Q.
Gorham, A. W.,	Alstead, N.H., U.S.	Simpson, T. C.,	St. Andrews, Q.
Hadley, A.,	North Georgetown, Q.	Stephens, J.,	
Higginson, C. M.,	L'Orignal, O.	St. Louis, D.,	Ormstown, Q.
Kemp, A.		Sturrock, T.,	Laggan, O.
Lamb, A. S.,	Montreal, Q.	Thayer, S. W.,	
Lee, Geo.,	Brighton, Mass., U.S.	Townsend, G.,	New Glasgow, N.S.
Lofgren, O. C.,	Sauk Centre, Minn., U.S.	Tracy, A. W.	
Macaulay, G. E.,	Salem, N.Y., U.S.	Twombly, S. S.,	Fayetteville, Arkansas, U.S.
McCrank, J. A.,	Plantagenet, Q.	Watson, John,	Beauharnois, Q.
McDonald, T. B.,	Boston, Mass., U.S.	Wells, G. P.,	Cochrane, N.W.T.
McDonald, D. M.,	Laggan, O.	Wylie, M. C.,	
McDougall, J.,	Montreal, Q.		
McGuire, W. C.,			

SUMMARY.

Students in Law, McGill College				39
" in Medicine, "				257
" in Arts.— "				
Men	Graduates	5		
	Undergraduates	126		
	Partial	48		
	Occasional	57		
Women	Graduates	7		
	Undergraduates	47		
	Partial	4		
	Occasional	51		338
Students in Arts, Morrin College				12
" " " St. Francis College				15
" " " Stanstead Wesleyan College				1
" " Applied Science, McGill College :—				
	Undergraduates	75		
	Partial	10		85
" Veterinary Science				54
				801
Deduct entered in two Faculties				3
				798
McGill Normal School Teachers-in-training				104
Total				912

Donations to Library and Museum,

FROM JUNE, 1890, TO MAY, 1891.

TO THE LIBRARY.

From the Aberdeen University : Calendar for 1890-91.

From the Smithsonian Institution : Contributions to Knowledge, Vol. 26.

From the McGill Graduates' Society : Charles Kingsley's Works, 10 vols.
Washington Irving's Works, 9 vols.
Nathaniel Hawthorne's Works, 5 vols.
Furness' Variorum Shakespeare ; Othello and Merchant of Venice.
The Carisbrooke Library, 9 vols.
English Statesmen Series, 19 vols.
Origins of the English People ; History of the People of the United States, 2 vols.; Manual of Historical Literature ; American Statesmen Series, Daniel Webster ; Kingsley's Heroes and Water Babies, 2 vols.; Concise Dictionary of the Bible ; Greek Moods and Tenses ; Greek Grammar ; Matthew Arnold's poems ; Remsen's Organic Chemistry ; Anglo-Saxon Poems, by J. M. Garnett ; Whitney's Sanskrit Grammar and Bosworth's Anglo-Saxon Dictionary, Part 3 ; The Phonological Investigation of Old English, by Albert S. Cook. In all 68 vols.

From Sir J. W. Dawson : Geological Survey of New Jersey, Report, Vol. 2.

From Mr. Peter Redpath : Oxford Historical Society, Collectanea, Vol. 2.

From the United States Government, Treasury Department : Report of the Director of the Mint, 1889.

From Sir J. W. Dawson : Report of the Superintendent of Public Instruction of the Province of Quebec, 1888-89.

From the British Association for the Advancement of Science : Report for 1889. Meeting at Newcastle.

From the Minister of Agriculture, Ontario : Report of the Royal Commission on Mineral Resources, 6 copies.

From the McGill Graduates Society : Treatise on Masonry Construction ; Descriptive Geometry, by Linus Faunce ; Treatise on Marine Surveying.

From the Smithsonian Institution : Annual Report, 1887 ; do., United States National Museum, 1887 ; do., Part 2, 1886.

From the Meteorological Institute, Christiania : The Norwegian North Atlantic Expedition, Actinida, 1876-78.

From the University, Melbourne, Australia : Calendar for 1889-90.

From Sir J. W. Dawson : History of Education in North Carolina ; Bulletin of the U. S. National Museum, No. 37 ; Preliminary Report on the Collection of Mollusca and Brachiopoda obtained in 1887-88.

From the Johns Hopkins University : The Negro in Maryland, by Jeffrey R. Brackett, and eight pamphlets.

From the Minneapolis Public Library : Four Catalogues.

From the University of New Brunswick, Fredericton : Calendar for 1889-90.

From the Dalhousie University, Halifax : Calendar for 1890-91.

From the U. S. Government War Department : Weather Maps for May.

From the Lieutenant-Governor of Bengal: Species of Ficus of the Indo-Malayan and Chinese countries and Appendix; Annals of the Botanic Garden, Calcutta, Vol. 2.

From Sir J. W. Dawson: Records of the Geological Survey of New South Wales, Vol. 1, Part 3, 1889.

From the Trustees of the Newberry Library, Chicago: Proceedings for 1889.

From the Edinburgh University: Calendar for 1890-81.

From the U. S. Geological Survey: 8th Annual Report 1886-87, Parts 1 and 2.

From the Royal Society of Canada: Proceedings and Transactions, Vol. 7, 1889.

From Sir J. W. Dawson (the author): Modern Ideas of Evolution.

From the Provincial Government, Quebec: Statuts de Québec, 1890.

From Messrs. Macmillan & Co., London: Green's Short History of the English People, Parts 3 and 4; Shakespeare's Othello, Cymbeline and Tempest, with introduction, by K. Deighton; Scott's Lay of the Last Minstrel, cantos I, III; First Greek Grammar Syntax, by W. G. Rutherford, first Latin Verse Book by W. E. Pantin; Macmillan's Latin Course, Part 2; Euripides, with notes by M. A. Bayfield; Virgil Æneid, Books 3 and 7, by Page and Calvert; Cæsar-Gallic War, Book 6, by C. Colbeck.

From the Astronomer Royal, Greenwich: Greenwich Observations for 1887; do. appendix II; do. appendix III.

From Messrs. Macmillan & Co., England: Shakespeare—Julius Cæsar, with notes; Questions and Exercises in English Composition, by Nichol and McCormick.

From the Provincial Government, Quebec: Journals of the Legislative Council, Vol. 23, 1889; Journals of the Assembly, 1889; Sessional Papers, Vol. 21, 1888; do., Vol. 22, 1889.

From the Oxford Historical Society, per Mr. Peter Redpath: Survey of the Antiquities of the City of Oxford by Anthony Wood.

From the McGill Graduates' Society: Handy Dictionary of Anglo-Saxon Poetry, by James A. Harrison; Nathaniel Hawthorne's Works, 7 vols.; Notes and Queries,-6th series, 2 vols.; do., 7th series, 8 vols.; Ireland under Elizabeth and James I.

From the Institution of Civil Engineers: Minutes and Proceedings, Vols. 100 and 101.

From Association Geodesique Internationale, Christiania, Norway: Geodatische Arbeiten, Heft VI. and VII.

From the Glasgow University: Calendar for 1889-90 and 1890-91.

From the Department of Agriculture, Ottawa: Statistical Year Book of Canada for 1889.

From the Queen's Printer, Winnipeg: Acts of the Legislature for the province of Manitoba, Vol. 1, 1890.

From the Royal Colonial Institute: Vol. 21, Report of Proceedings 1889-90.

From the Geological Survey, Texas: First Annual Report, 1889.

From the American Association for the Advancement of Science: Proceedings of 38th meeting, held at Toronto, August, 1889.

From Hon. L. R. Masson (the author): Les Bourgeois de la Compagnie du Nord-Ouest; second series.

From Sir J. W. Dawson: Jahrbuch du Kaiserlich Koniglichen Geologischen Reichsanstalt, 4 quarterly parts, forming one volume; Genesis of the Arietidæ, by Alpheus Hyatt.

From the Geological Survey, Texas: Annotated Check-List of the Cretaceous Invertebrate Fossils of Texas.

From the University of Sydney, N. S. W.: Calendar for 1890.

From the Mayor and Council of Toronto : By-Laws of the City of Toronto.

From the U. S. Geological Survey ; Monograph, Vol. 16 ; Palæozoic Fishes of North America ; U. S. Geographical Surveys West of 100th Meridian, Report ; Bulletins of the U. S. Geological Survey, Nos. 54, 55, 56 and 57.

From Sir J. W .Dawson : Gems and precious stones of North America, by George Frederick Kunz.

From the Glasgow University : Calendar for 1889-90.

From the Dominion Government, Ottawa : Sessional papers, session 1890, Vol. 2 ; "Trade and Navigation" ; Statutes of Canada, 52-53rd year Victoria.

From Hon. Geo. E. Foster, Minister of Finance, Ottawa ; Dictionary of the Micmac language, by Rev. S. T. Rand.

From the Provincial Government, Quebec : Journals of the Legislative Assembly, Vol. 24, 1890.

From the Queen's Printer, Winnipeg : Journals of the Assembly, 1890.

From the U. S. National Museum, per the Smithsonian Institution : Proceedings, Vol. 12, 1889 ; Bulletin of the Museum, No. 38.

From Professor Bovey : Notice sur les Instruments Enregistreurs ; Report of the Royal Commission on the Mineral Resources of Ontario.

From Mrs. Hunter, per Professor Bovey : The Forth Bridge, in its various stages ; ditto, Foundations illustrated ; the Tay Bridge, illustrated ; the Tay Viaduct illustrated ; the Carpenter's and Joiner's Assistant, and pamphlets ; the Forth Bridge and all about it ; Sinking the Cylinders of the Tay Bridge by pontoons ; Tay Bridge Guide ; and a number of photographs.

From the Trustees of the British Museum : Catalogue of Birds, Vols. 13, 15 and 18 : Catalogue of Fossil Reptilia and Amphibia, part 4 ; Guide to Geology and Palæontology, Parts 1 and 2.

From Sir J. W. Dawson : 86th report of the British and Foreign Bible Society, 1890.

From Rev. Frederick Frothingham, Milton, Mass. : Biographical Sketches of Graduates of Harvard University, 3 vols.

From the Institution of Civil Engineers : Minutes of Proceedings, Vol. 102, 1 vol., and brief subject index, Vols. 59 to 102.

From the author (W. Rae Macdonald, Edinburgh), per Mr. H. J. Johnston : The Construction of the Wonderful Canon of Logarithms by John Napier, translated by W. Rae Macdonald.

From E. K. Greene, by Sir J. W. Dawson : Egyptian photographs—album.

From the Dominion Government, Ottawa : Sessional papers, 1890 (various), 15 vols. ; Journals of the House of Commons, Ottawa, Vol. 24, 1890, 1 vol. ; Journal of the Senate, Ottawa, Vol. 24, 1890, 1 vol.

From the McGill Graduates Society : " Carisbrooke Library," Vol. 11 ; Swift's works.

From the Provincial Government, Quebec : Sessional papers, departmental reports, 1890, 2 vols. ; report of the Department of Agriculture, 1890.

From the American Institute of Mining Engineers : Vol. 18, 1890.

From George Cruikshank : a collection of English proverbs, by F. Ray, 1678.

From Rev. John Scrimger, M.A.: Casus Conscientiæ, by J. P. Gury ; Compendium Theologiæ Moralis, by J. P. Gury.

From New York State Library, Albany : 43rd report State Museum of Natural History, 1890 ; Regent's report for 1889.

From the Institution of Engineers and Shipbuilders in Scotland : Transactions, Vol. 33, 1890.

From the University College of Wales, Aberystwith : Calendar for 1890-91.

From the author (George Washington Moon) : the Eruption of Krakatoa and subsequent Phenomena ; Learned Men's English ; Eden and other poems, 3 vols.

From the Geological Survey of New Jersey : Vol. 2, Part 2, 1890.

From Messrs. Macmillan & Co , England ; Livy, Book 22, by Capes & Melhuish ; Virgil, Æneid, viii, by A. Calvert ; the Gospel, according to St. Luke, with introduction and notes by Rev. John Bond.

From the U. S. Government Director of the Mint : Report of the Director of the Mint, 1890.

From the authors (Benn Pitman and J. B. Howard) : The Manual of Phonography.

From the author (Major-General D. J..F. Newall) : The Highlands of India ; a Chronicle of Field Sports and Travel.

From the American Society of Mechanical Engineers : Transactions, Vol. 11, 1890.

From the University of Toronto : Examination Papers, 1890.

From Henry Mott : Jubilee History of Trinity Church, Montreal.

From the U. S. Geological Survey, per Sir J. W. Dawson : Mineral Resources of the United States, by David T. Day ; Ninth Annual Report, 1887-88 ; Monograph, Vol. 1, Lake Bonneville.

From Harvard University : Catalogue for 1890-91.

From the Geological Survey of Pennsylvania : Dictionary of Fossils, Vols. 2. and 3, 2 vols.; Atlas Anthracite Fields, Part 3 ; Oil and Gas Region, 1890.

From Sir J. W. Dawson : Illustrated Montreal.

The following 225 volumes from Peter Redpath, Esq. : Stevens' Fac-Similes of Manuscripts in European Archives, relating to America, 1773-1783, 5 vols; Tanner's Notitia Monastica (folio), 1 vol.; Lyson's Magna Britannia, 7 vols.; The Retrospective Review (1820-1854), 18 vols.; Byzantine Historians, 49 vols.; Annual Register 1888-89, 2 vols.; Histories of Various States (Elzevir) (1626-1639), 22 vols.; Alumni Oxonienses (1715-1886), 3 vols., by Joseph Fortier ; Reports of the Scientific Results of the Exploring Voyage of H. M. S. Challenger, 10 vols.; Calendars of State papers, 12 vols.; Chronicles and Memorials of Great Britain, 14 vols.; do. (Scottish series), 4 vols.; do. (Irish series), 1 vol.; Report of Royal Commission on Historical MSS., 7 vols.; also Hakluyt Society publications, 4 vols.; Surtees Society publications, 3 vols.; English Dialect Society, 15 vols.; the Ballad Society, 9 vols.; Oxford Historical Society, 5 vols.; the New Club (Chalmers' Caledonia), 2 vols.; the Abbotsford Club, 31 vols.; Society of Antiquarians (Archæologia), 1 vol.

From the McGill College Book Club :—

Biography and Memoirs.—Hayward's Letters, by H. E. Carlisle, 2 vols.; Hutchinson, Diary and Letters ; Lowe, Prince Bismarck, 2 vols.; Stephen, Life of Henry Fawcett ; Lanman, Haphazard Personalities; Long, Memoirs of Robt. E. Lee ; Life of H. W. Longfellow, 2 vols.; Nicolson, Memoirs of Adam Black ; Tupper (M. F.), My Life as an Author ; Carlyle and Emerson, Correspondence, 2 vols.; Moffatt, (Lives of Robert, and Mary); Coligny, by Bersier ; Chauveau, Jun., Frederic Ozanam ; Swinburne, Victor Hugo ; De Lesseps, Recollections of Forty Years ; Dodge (W. E.), Memorials of ; Shaftesbury (Earl of), Life and Work of, 3 vols.; Rice, Reminiscences of Abraham Lincoln ; Larkin, Carlyle and the Open Secret of his Life ; Autobiography of Hugh Stowell Brown ; Darwin (Charles), Life and Letters, 2 vols.; Charles Reade, a Memoir, 2 vols.; Rosmini-Serbati, Life of, 1 vol.; Siddons (Mrs.), by Mrs. A. Kennard ; Souvenirs of my Time, Fremont ; Random Recollections, Stanton.

History and Materials for History.—Skottowe (B. C.), Our Hanoverian Kings ; Parliamentary History of England from 1832 ; Chapters in European History, 2 vols.; The Theory of the State ; A Diary of Two Parliaments ; Despatches of Lord Gower ; France under Richelieu and Mazarin, 2 vols ; Retrospections of America, History of the Parsis, 2 vols.; The Growth of the

English Constitution; The Dawn of the XIXth Century, 2 vols.; Popular Government by Sir H. S. Maine; The Fall of Constantinople; The Governance of England; The Bishops in the Tower, by Luckock; Too late for Gordon and Khartoum; History of Rome (Mommsen), 2 vols.; The Bulgarian Struggle for Independence; The Invasion of the Crimea, Vol. 5; The Bastille, by Bingham, 2 vols.; The English in America, 3 vols.; The Story of the Saracens, by Gilman; The Story of Persia, by Benjamin; Scotland, as it was, and as it is (Argyll), 2 vols.; Parliamentary Generals, by Walford.

Travels, etc.—The Far Interior by W. M. Kerr, 2 vols.; English Life in China (Knollys); The Western Pacific and New Guinea; Oranges and Alligators; Through the British Empire, 2 vols.; The Heart of Africa (Schweinfurth), 2 vols; Wanderings in China (Cummings), 2 vols.; The Egyptian Campaign (1882-85), 2 vols.; Across the Jordan (Schurman); Flying Leaves from East to West (Pfeifer); The Chersonese with the Gilding off, 2 vols.; Campaign and Cruising in Florida; An American in Norway (Vicary); An Iron-Bound City (O'Shea), 2 vols.; Hesperothen, or Notes from the West, 2 vols; Twenty-One Years' Work in the Holy Land; An Italian Pilgrimage; The Holy Land and the Bible, 2 vols.; Guatemala, the Land of the Quetzal; A Season in Egypt (Petrie); Rambles and Studies in Greece (Mahaffy).

Shakespeare and the Drama.—Hard Knots in Shakespeare (Perring); What we really know of Shakespeare (Dall); English Dramatic Literature (Ward), 2 vols.

Political Economy.—Capital, by Carl Marx, 2 vols.; Protection *versus* Free Trade (Hoyt); Protection and Free Trade (Henry George); Progress and Poverty (Henry George); Prisoners of Poverty (Campbell).

Poetry.—Noel, Essay on Poets and Poetry; Stedman, Victorian Poets; Morison, Great Poets as Religious Teachers.

Theology, etc.—Haddon, The Larger Life; Plumptre, History of Pantheism, 2 vols.; Hastings, Obscure Scripture Characters; Roberts, Liberalism in Religion; Matheson, Can the New Faith live with the Old; Schruder, Cuneiform Inscription and the Old Testament; Twining, Symbols of Christian Art; Mathers, The Kabbalah Unveiled; Schindler, Messianic Expectations; Kingsford, Astrology Theologized; Duffield, English Hymns, their Authors and History; Letters from Heaven; Renan, Studies of Religious History; Lillie, Buddhism in Christendom; Cook, The Fathers of Jesus, 2 vols.; Tolstoi, My Religion.

Literature.—Clifford, Lectures and Essays; Caine, Cobwebs of Criticism; Hedge, Hours with German Classics; Posnett, Comparative Literature; Coupland, The Spirit of Goethe's Faust; Hatton, Journalistic London; Life and Genius of Goethe; Zeller, Greek Philosophy; Farrar, Language and Languages; Rees, The Pleasures of a Bookworm; Scherer, History of German Literature, 2 vols.

Astronomy.—Lockyer, The Chemistry of the Sun.

Botany.—Heyn and Stallebrass, The Wanderings of Plants and Animals.

Canadiana.—Adam G. M., The Canadian North-West; Campbell Rev. Robt., History of St. Gabriel Street Church.

Music.—Rockstro, History of Music; Fay Amy, Music Studies in Germany.

Miscellaneous.—Stokes Rev. J., Ireland and the Celtic Church; Hyndman H. M., The Bankruptcy of India; Holder C. F., The Ivory King; Ireland, The Blot upon the Brain; Murray Grenville, Under the Lens, 2 vols.; Von Richtofer, Cattle Raising on the Plains; Proctor R. A., Nature Studies; Morgan, Springs of Conduct; Schmidt O., The Mammalia in their Relation to Primeval Times; The New Godiva; Pater, Marius the Epicurean; Koettschau, The Coming Franco-German War; Field Mrs. E. M., Ethne, Amiel's Journal; Hale E. E.,

Franklin in France; Curtis G. T., Creation or Evolution; Dawson, The Wealth of Households; Bush, Harvard, The First American University; Hartman, Paracelsus; Finch, Romantic Love and Personal Beauty; Howorth, The Mammoth and the Flood; Phantasms of the Living, 2 vols.; Zogbaum, Horse, Foot, and Dragoons; Hinde, The Buchholz Family; Cundall, Reminiscences of the Colonial and Indian Exhibition; The Remote Antiquity of Man not Proven. In all 175 vols.

From McGill Graduates Society: The Carisbrooke Library, Vols. 12 and 13, 2 vols.; Memoirs of Edward Gibbon; History of Florence.

From the author (Dr. G. B. Longstaff, London): Studies in Statistics, 1 vol.

From the Melbourne University, N.S.W.: Calendar for 1891, 1 vol.

From the Dublin University: Calendar for 1891, 1 vol.; Examination papers for 1891, 1 vol.

From Professor Moyse: An old English Grammar, Sievers, 1 vol.

From Sir J. W. Dawson: The Missouri Botanical Garden, 1 vol.

From the McGill Graduates Society: Zeitschrift für Instrumentenkunde for 1890, 1 vol.; Elementary Theory of the Tides, by T. K. Abbott, 1 vol.

From the Railroad Commissioners of Massachusetts: 22nd Annual Report, January, 1891, 1 vol.

From Douglas Brymner, Department of Archives, Ottawa, Report for 1890, 1 vol.

From Professor John Cox: Dynamo-Electric Machinery, by Silvanus P. Thompson, 2 vols.

From Allan Wyon, London, Eng.: The Great Seals of England, 1 vol.

From the Corporation of Montreal: Annual Report for 1889, 1 vol.

From the U. S. Coast and Geodetic Survey: Report, 1888 (2 copies), 2 vols.

From the Astronomer Royal, Greenwich: Greenwich Observations, 1888, 1 vol.

From the Smithsonian Institution: Smithsonian Report, 1 vol.; do U. S. National Museum, 1 vol.

From the Clerk Maxwell Memorial College: Scientific Papers, 2 vols.

From Dr. J. G. Bourinot, Ottawa: Debates of the House of Commons, 1890, 2 vols.

From George Iles: The Reader's Guide in Economic, Social and Political Science, 1 vol.

From Jeffrey H. Burland: The Westinghouse Air-Brake Co., 1 vol.; Architect and Artizan's Permanent Price Book, by F. N. Boxer, 1 vol.

From Peter Redpath, Esq., per the Historical Society of Pennsylvania: Life and Writings of John Dickinson, Vol. 1, 1 vol.

From the Library of the Medical Faculty: Journal of Science and the Arts, published by the Royal Institution of Great Britain, 1817 to 1830, 29 vols.

From the Provincial Government of Quebec: Statutes of Quebec, 1890, 1 vol.; do in French, 1 vol.

From John C. Branner, State Geologist, Arkansas: Annual Report of the Geological Survey of Arkansas, 1 vol.

From the Institution of Civil Engineers, London, Eng.: Minutes of Proceedings, Vol. 103, 1 vol.

From the Entomological Society of Ontario: Annual Report of the Society and of the Fruit Growers' Association, 1 vol.

From Macmillan & Co., London: Herodotus, Book 7, by A. F. Butler; do Book 6, by John Strachan.

From the author (George Washington Moon): Men and Women of the Time.

From the McGill Graduates Society: Character Writings of the 17th Century;

English Men of Letter Series, 9 vols; Bunyan, Hume, Spenser, Burns, Macaulay, Sterne, Goldsmith, Southey, Thackeray; Shakespeare's England, by William Winter; Milton, Arcades and Comus, by A. W. Verity; Peel, by J. R. Thursfield; Drake, by Julian Corbett; Warwick, by C. W. Oman; Constitutional Documents of Canada, by William Houston; Canada and the Canadian Question, by Goldwin Smith; Analysis of English History, by C. W. A. Tait; The Journal of Sir Walter Scott; The American Commonwealth, by James Bryce, 2 vols.; Principles of English Etymology, by Walter W. Skeat, 2 vols.; The Arthurian Legend, by John Rhys; English Miracle Plays, by A. W. Pollard; Short Studies of Shakespeare's Plots, by Cyril Ransome; The Vikings in Western Christendom, by C. F. Keary; The Historic Note Book, by Rev. E. Cobham Brewer; Key to North American Birds, by Elliott Coues; Constitutional History of the United States, by Von Holst, Vols. 2 and 3; Intellectual Life, by Philip G. Hamerton.

From Sir J. W. Dawson: Arkansas Geological Survey, Annual Report for 1889.

From Aberdeen University: Calendar for 1891–92.

And the following pamphlets and books in paper covers:—

From the Zoological Society of London: Proceedings for the year 1889, Part 4; Transactions, Vol. 12, Part 10.

From Sir J. W. Dawson: Proceedings of the American Philosophical Society, three parts, Nos. 131, 132 and 133; Ninth Annual Report of the State Mineralogist of California.

From the Georgetown University: Catalogue for 1889-99.

From the University of Vermont: General Catalogue, 1791-1890.

From the Secretary of the Australian Museum, Sydney, N.S.W: Records of the Museum, Vol. 1, No. 2, 1890.

From the University of Trinity College, Toronto: Memorials presented to Lord Knutsford, with appendices.

From the Canadian Institute, Toronto: Proceedings, 3rd series, Vol. 7, Part 2.

From (the author) Professor Dr. Friedrich Goppelsiœder: Ueber Feuerbestallung, 1889.

From Trinity College school, Port Hope: Calendar for 1890-91.

From an unknown donor: 11th Annual Report of the North Carolina Agricultural Experiment Station for 1888.

From the Signal office, U.S. War department: Weather maps for June, July, August and September.

From Laval University, Quebec; Annuaire de l'Université, 1890-91.

From the Department of Agriculture, Ottawa: Report on Experimental Farms for 1888-90.

From Baron F. von Mueller: Second Systematic Census of Australian Plants, Vol. 1.

From the Department of Mines, Sydney, N.S.W.: The Fossil Fishes of the Hawkesbury Series at Gosford; Coal and Plant Bearing Beds of Palæozoic and Mesozoic Age; Annual Report of the Department of Mines, N.S.W., for 1889.

From Sir J. W. Dawson: Bulletin de la Société Belge de Géologique, Vol.3, Part 7; Report on Fish Breeding operations in the Dominion of Canada, Part 2; Transactions of the Manchester Geological Society, Vol. 20, Parts 20 and 21.

From (the author) Professor Scrimger: Jesuit Morals, Montreal, 1890.

From the Royal Society of London: Philosophical transactions, Vol. 180, Parts A and B; Register of the Royal Society.

From (the author) Ernest Myrand: Une Fête de Noel sous Jacques Cartier (2 copies).

From the Zoological Society of London: Proceedings of the Society, Parts 1 and 2, 1890.

From the Imperial University of Japan: Calendar for 1889-90.

From the United States Department of Agriculture: North American Farmer, Part 3.

From Professor Bovey: Transactions of the Society of Engineers, 1889, and General Index 1861-1889.

From the United States Department of Agriculture, Washington: Food Adulterants, Manufacture of Sugar, and Culture of Sugar Beet, 13 Bulletins.

From Dr. J. Clark Murray: Fifty-sixth and Fifty-seventh Annual Report of the Perkins Institution, 1888-89; Kindergarten for the Blind, 1887; Kindergarten for the Blind, Annual Report, 1889.

From the Secretary of the Department of Railways and Canals, Ottawa, 10 annual reports.

From Sir J. W. Dawson: Geological Survey along the Macon and Birmingham Railway, by J. W. Spencer; Report of the Commissioner of Agriculture and Colonization, P.Q., 1890; Report of the Secretary and Registrar, P. Q.; Rapport du Conservateur du Museum, 1890; Bulletin de la Société Belge de Géologie, Tome 4, Fascicule 1.

From the Owens' College, Manchester: Calendar for 1890-91.

From Henry Boddington: Pamphlets and Plans of the Manchester Ship Canal.

From the Geological Survey of New South Wales, per Sir J. W. Dawson: Records of the Geological Survey of New South Wales, Vol. 1, Parts 1, 2 and 3, Vol. 2, Part 1; Bibliography—Australian and Tasmanian Aborigines, Part 1; Annual Report of the Department of Mines, N.S.W., for 1889.

From A. W. Greely, chief signal officer U. S. War Department, Washington: Weather maps for October, November and December.

From the American Society of Civil Engineers: Transactions, August, October and November; Constitution and list of members, 1890.

From the University College, Toronto: Calendar for 1890-91.

From Cornell University: Register for 1889-90.

From Professor Bovey: Report of the New York Meteorological bureau, December, 1889; Bulletin de l'Académie Impériale des Sciences de St. Petersbourg.

From the author, George Washington Moon: Improvements in Apparatus for the Amalgamation of Gold and Silver; What is Poetry? Army Signalling.

From Professor Bovey: The Ironmonger, October 4th and November 1st.

From the Manchester Literary and Philosophical Society, per Sir J. W. Dawson: Memoirs and Proceedings, 4th series, Vol. 3

From the Geological Survey of Canada: Catalogue of Canadian Plants, Part 5, by John Macoun; List of Canadian Hepaticæ, by William H. Pearson.

From Dr. George M. Dawson, Ottawa: Later Physiographical Geology of the Rocky Mountain Region, etc., 1890.

From the author (Sir J. W. Dawson): On Burrows and Tracks of Invertebrate Animals in Palæozoic Rocks, and other markings.

From the Museum of Comparative Zoology at Harvard college, per Sir J. W. Dawson: Bulletin No. 3, Vol. 20.

From Manitoba University: Calendar for 1890.

From the United States Geological Survey, per Sir J. W. Dawson: Seven bulletins of the United States Geological Survey.

From Yale University: Catalogue for 1890-91.

From Harvard University: Annual Report of the Curator of the Museum of Comparative Zoology.

From Hon. Judge Parker, M.A., F.R.G.S., of Edinburgh, per Mr. A. T. Taylor; Portrait of Hon. Peter McGill, formerly one of the Governors of McGill College.

From the Provincial Government, Quebec—Report of the Superintendent of Public Instruction, 1889-90.

From the American Society of Civil Engineers—Index to the Transactions, vols. 1 to 21.

From the University of the State of New York—Bulletins of the State Museum, (1 to 4), vol. 2, Nos. 7, 8, 9, and 10.

From the Institution of Mechanical Engineers, London—Proceedings, May, 1887.

From the Manitoba University—Calendar for 1890.

From Hon. J. M. Rusk, Department of Agriculture, Washington—20 Bulletins of the Department, Botany, &c.

From J. Theo. Robinson—Starke's Almanac for 1891.

From the Boston Society of Natural History—Proceedings of the Society, vol. 24.

From the Canadian Institute, Toronto—Transactions, Session 1889-90, part 1.

From the Royal Irish Academy, Dublin—Transactions, vol. 24, part 14; Proceedings, vol. 1, No. 4.

From the McGill Graduates' Society—The Ornamental Penman's Pocket-Book; A System of Easy Lettering, by J. H. Cromwell.

From the author (Sir J. W. Dawson)—On Fossil Plants from the Similkamen Valley and other places in the Southern Interior of British Columbia.

From the Nova Scotian Institute of Natural Science—Proceedings and Transactions, 5 parts.

From the U. S. Coast and Geodetic Survey—Bulletins Nos. 19 and 21.

From Dr. Geo. M. Dawson, Ottawa—Note on the Geological Structure of the Selkirk Range, 1891.

From the College of New Jersey, Princeton, N.J.—Catalogue for 1890-91.

From Professor Frank D. Adams—22 Bulletins of Agricultural Experiment Station, Cornell University.

From the North Carolina Agricultural Experiment Station—Bulletins Nos. 73 and 74.

From the U. S. Naval Institute, Annapolis, Md.—Proceedings, vol. 16, No. 5.

From Dartmouth College, Hanover, N.H.—Catalogue for 1890-91.

From the Johns Hopkins University, Baltimore—Fifteenth Annual Report, 1890.

From the Harbour Commissioners, Montreal—Annual Reports for 1899.

From the University of Vermont—Catalogue for 1890-91.

From the Geological Survey of N. S. Wales—Records, vol. 2, part 2, 1890; Palæontology, No. 7.

From Sir J. W. Dawson—(13 parts) Proceedings of the Nova Scotian Institute of Natural Science.

From U. S. War Department—Weather Maps for January, February, and March.

From the University of Rochester, N.Y.—Catalogue for 1890-91.

From Sir J. W. Dawson—Proceedings of the American Philosophical Society, vol. 28, No. 134.

From the Norwegian North-Atlantic Expedition—Zoology, Pycnagonidea.

From Trinity University, Toronto—Calendar for 1891.

From Sir J. W. Dawson—Geological and Natural History Survey of Minnesota, 17th Annual Report, 1888.

From the Manchester Literary and Philosophical Society—Memoirs and Proceedings, vol. 4, Nos. 1 and 2.

From the Medical Faculty—A number of miscellaneous books and numbers of magazines.

From the Polytechnic Institute, Worcester, Mass.—Twenty-first Annual Catalogue, 1891.

From the Postmaster-General, Ottawa—Report of the Department for 1890.

From the Trustees of the Newberry Library, Chicago—Proceedings for the year 1890.

From the Superintendent of Education in the Public Schools of Nova Scotia—Annual Report, 1890.

From Baron Fred. von Mueller, Melbourne—Select Extra-Tropical Plants, &c.

From the Meteorological Office, Toronto—Report of the Meteorological Service for 1887; Rainfall maps to accompany ditto.

From Sir J. W. Dawson—An Index to Economic Products of the Vegetable Kingdom in Jamaica.

From the Canadian Institute, Toronto—Transactions, vol. 1, part 2; Fourth Annual Report of the Institute, 1890-91; Time-Reckoning for the Twentieth Century, by Sandford Fleming.

TO THE MUSEUM.

From Dr. G. M. Dawson, Ottawa: Shell and Bone Beads or Wampum from Lillooet, B.C.

From Miss Rimmer, Montreal: Cabinet and Collection of Shells.

From Mrs. Penhallow, Montreal: Japanese Wax (Rhus succedanea) and Candles.

From Dr. G. P. Girdwood, Montreal: Tumor from Thuja occidentalis.

From E. P. Mathewson, B.A.Sc., Pueblo, Colorado: Fossil Leaves from Golden, Colorado; Metallurgical Products, etc., from Pueblo, Colorado.

From Baron F. Von Mueller, Ph.D.: Fossil Fruits from the Tertiary of Ballarat, Australia.

From Mr. John L. Legro, Rochester, N. H.: Specimens of Chiastolite.

From Mrs. J. Burton Hill—Miscellaneous specimens collected by the late Mr. Charles Gibb, B.A., including Nubian Dresses, Phylacteries, Papyri, Mummied Crocodiles, etc, from Egypt, and a collection of Natural History Specimens from various localities, including sections of Palm and Bamboo and Palm Seeds.

From Mr. A. J. Klock: Specimens of Galena and Copper Pyrites from Klock's mines, Montreal river.

From Mr. W. E. Decks, B.A.: Specimen of Snapping Turtle (Chelydra).

From Dr. Shepherd, Montreal: Specimen of Psitacula Undulata from Brazil; also of the Prairie Wolf from Manitoba.

From Mr. H. Trueman, B.A.Sc., Chicago: Specimens of Calymene Niagarensis, from Grafton, Illinois.

From Miss P. Lemesurier, Montreal: Specimens of Bryozoa, from Ferryland, Newfoundland.

From Professor P. J. Darey, Montreal: Specimens of Echinarachnius.

From Mr. F. D. Adams, M.A.Sc., Montreal: Skeleton of European Mole (Talpa Europea).

From Miss Helen Gairdner, Montreal: Specimens of Egg-capsules of Natica heros, from Maine.

From Mr. Thomas Walsh, Ormstown: Fossils from the Calciferous formation, Ormstown, P.Q.

From Miss C. Alice Baker: Concretions from the Connecticut River Valley.

From Mr. R. A. Klock, B. A., Klock's Mills: Head of Moose.

From Dr. G. M. Dawson, Ottawa: Specimens of *Sphæria* from New Zealand.

From Mr. H. D. Moore, Moore's Station, P. Q.: Specimen of Wild Turkey.

From Mr. James Reid, Blairgowrie, Scotland: Slabs with Fossil fishes from Caithness.

From Mr. R. Morton Middleton, London, England: Valuable collection Dried Plants from Great Britain, North America, Continental Europe, and South Africa, and Antarctic Plants from the expedition of the Erebus and Terror; also a collection of Woods. These collections comprise about 3,500 specimens.

From Dr. G. P. Girdwood, Montreal: Specimen of *Orthoceras titan*.

From The Geological Survey of Canada: Specimens of *Ogygiopsis*, from Mount Stephen, B.C.

From A. E. Barlow, B.A., Ottawa: Specimen of Kyanite from Nipissing, Ont.

From Miss Bella Craig, of Abbotsford, P. Q, through W. E. Deeks, B.A Native Tree Seeds.

From Mr. L. Cockayne, Christchurch, New Zealand—Collection of Plants from the Southern Alps.

From Dr. Harrington, Montreal—Collection of Minerals from Branchville Connecticut.

From Prof. H. T. Bovey, Montreal—Collection of Fossils and Aboriginal Pottery from Ontario.

From Dr. Wolfred Nelson, New York—Collection of Elephant and Mastodon remains from the Tertiary of Texas.

From Mr. George Hague, Montreal—Teeth of Carcharodon, etc., from the phosphate beds of South Carolina.

From Dr. Buller, Montreal—Carved Totem post, 32 feet high, from the Queen Charlotte Islands.

Observatory.

Latitude, N. 45° 30′ 17″. Longitude, 4h 54m. 18s.55.
Height above sea level 187 ft.

Superintendent.—C. H. McLeod, Ma.E.

Assistant Superintendent.—G. H. Chandler, M.A.

Assistant.—E. H. Hamilton, B.A.Sc.

Meteorological Observations are made every fourth hour, beginning at 3h 0m Eastern standard time; also at 8h 0m and 20h 0m. Independent bi-hourly temperature observations are also made. The principal instruments employed are the following:—Two standard mercurial barometers; one Kew standard thermometer; two Pastorelli thermometers; one maximum thermometer; one minimum thermometer; one set of six self-recording thermometers, with controlling clock, battery, etc.; two anemometers; one wind vane (wind-mill pattern); one anemograph, with battery, etc.; one sunshine recorder; one rain-band spectroscope; one rain gauge; and several spare thermometers.

The Anemometer and Vane are on the summit of Mount Royal, at a point about three-quarters of a mile north-west of the Observatory. They are 57 feet above the surface of the ground and 810 feet above sea level.

The Astronomical Equipment consists of:—The Blackman Telescope (6¼ in.); a photoheliograph (4½ in.); a 3¼ in. transit, with striding level; two 2 in. transits, arranged as collimating telescopes; one sidereal clock; one mean-time clock; one sidereal chronometer; one mean-time chronometer; one chronograph; batteries, telegraph lines and sundry minor instruments.

Observations for clock errors are made on nearly every clear night. Time exchanges are regularly made with the Toronto Observatory. Time signals are distributed throughout the city by means of the noon time-ball, continuous clock signals, and the fire alarm bells; and to the country, through the telegraph lines.

Observations of sun spots, for position and area, are made with the Blackman telescope and the photoheliograph.

The Blackman telescope is also employed in occasional work and for educational purposes.

University Gymnasium.

Instructor.—James Naismith, B. A.

The classes, which are open to Students of all the Faculties, will meet at the University Gymnasium, at hours to suit, as far as possible, the convenience of Students, and which will be announced at the commencement of the Session.

The Wicksteed Silver and Bronze Medals for Physical Culture (the gift of Dr. R. J. Wicksteed) are offered for competition to Students of the graduating class, and to Students who have had instruction in the Gymnasium for two sessions; the silver medal to the former, the bronze medal to the latter.

The award of these medals is made by Judges, appointed by the Corporation of the University.

Every competitor for the silver medal is required to lodge with the Judges, before the examination, a certificate of good standing in the graduating class, signed by the Dean or Secretary of the Faculty to which he belongs, and the medal will not be awarded to any Student who may fail in his examination for the degree.

Classes for the Students of the Donalda Special Course for women will be conducted by Miss Barnjum.

University Societies.

THE GRADUATES' SOCIETY OF McGILL UNIVERSITY.

INCORPORATED 1880.

OFFICERS FOR 1891-92.

President:

Prof. T. W. Mills, M.D.

Vice-Presidents:

C. J. Fleet, B.A., B.C.L.; Rev. E. J. Rexford, B.A.; Miss G. Hunter, B.A.

Secretary:

Wellington Dixon, B.A.

Treasurer:

Prof. C. H. McLeod, Ma.E.

Resident Councillors: Miss H. Reid, B.A.; A. Falconer, B.C.L.; Dr. Jas. Stewart; Wm. Patterson, M.A.; E. H. Hamilton, B.A.Sc.; Dr. J. S. McPhail, M.A.

Non-Resident Councillors: Sir James A. Grant, M.D., Ottawa; J. J. McLaren, B.C.L., Toronto; I. A. Nicholson, B.A., Charlottetown; Rev. Robt. Laing, M.A., Halifax, N.S.; Hon. Judge Lynch, Knowlton, P.Q.; C. N. MacNutt, B.A.Sc, Colorado.

OTTAWA VALLEY GRADUATES' SOCIETY.

President:

SIR JAMES A. GRANT, M.D.

Vice-Presidents:

HENRY P. WRIGHT, M.D.
ROBERT CASSELS, B.A.
ROBERT A. KLOCK, B.A., B.C.L.

Treasurer:

J. H. BURLAND, B.A.Sc.

Secretary:

Henry M. AMI, M.A.

Committee: R. W. Ells, LL.D.; G. F. Calder, B.A.; W. C. Cousens, M.D.; R. H. Conroy, B.C.L.; D. B. Dowling, B.A.Sc.

UNIVERSITY LITERARY SOCIETY.

ESTABLISHED 1869.

OBJECTS.—The encouragement of literary and scientific pursuits, and the promotion of self-culture among the members.

President:

MR. A. R. OUGHTRED, B.C.L.

First Vice-President:
A. S. CROSS, B.A., B.C.L.

Second Vice-President:
R. A. DUNTON, B.C.L.

Corresponding Secretary:
J. M. FERGUSON, B.C.L.

Recording Secretary:
C. A. BARNARD, B.C.L.

Treasurer:

F. W. HIBBARD, B.A., B.C.L.

Councillors: Messrs. Selkirk Cross, McGoun, Fry, Mallie, Parmelee and Yates.

UNDERGRADUATES' LITERARY SOCIETY.

CONSTITUTED 1880.

President:

W. J. LeROSSIGNOL.

1st Vice-President:

H. M. KINGHORN.

2nd Vice-President:

R. G. DAVEY.

Secretary:

A. B. WOOD.

Assistant Secretary:

CHAS. MANSUR.

Treasurer:

JAS. PURVES.

Special Committee: J. F. Warne, L. Drouin, W. Donahue, D. T. Davis and L. Greenberg.

McGILL COLLEGE YOUNG MEN'S CHRISTIAN ASSOCIATION.

OBJECT.—To promote the piety of its members and the cause of Christianity in the University.

MEMBERSHIP.—The active Membership of the Association shall consist of Graduates and Students of the University who are members of some Protestant church. Any Graduate and Student of good moral character may become an associate member. A social reception is given to new students at the beginning of the session.

SESSION 1891-92.

Hon. President:

SIR J. W. DAWSON, LL.D.

President:

JAS. TAYLOR, Arts, '92.

1st Vice-President:

H. N. GOFF, Med., '93.

2nd Vice-President:

G. S. SMITH, Sc., '92.

Corresponding Secretary:

R. H. BARNBY, Partial in Arts.

Recording Secretary:

R. M. CAMPBELL, Med., '94.

Treasurer:

R. O. ROSS, Arts, '92.

Assistant Treasurer:

J. PRITCHARD, Med., '94.

CHAIRMEN OF COMMITTEES :

Devotional :
GALEN H. CRAIK, Arts, '91.

Missionary :
W. H. MCARTHUR, Partial in Arts.

Music :
F. J. DAY, Arts, '94.

Social Purity :
A. NICHOLS, B.A., Med., '94.

On Handbook :
A. A. ROBERTSON, B.A., Med., '94.

Membership :
Arts : A. MCVICAR, '93.
Med. : A. T. HENDERSON, '93.
Science : E. BOLTON, '92.
Law : A. R. HALL, B.A., '93.
Comp. Med. : not appointed.

Social :
Not appointed.

Bulletin :
ANGUS GRAHAM, Arts, '94

McGILL UNIVERSITY ATHLETIC ASSOCIATION.

ESTABLISHED 1884.

Open for Membership to Undergraduates in this University.

President :
SIR WILLIAM DAWSON.

Vice-President :
WM. WALSH (Med.).

Secretary :
W. GREGORY SMART (Sc.).

Treasurer :
PROF. B. J. HARRINGTON, B.A., Ph. D.

Assistant Treasurer :
V. HALLIDAY (Med.).

IN AFFILIATION.

Foot-Ball Club.

President: ALEX. W. WALSH (Med.).

Vice-President : D. W. MACFARLANE (Sc.).

Sec.:—J. L. WALKER (Med.).

Treas.:—D. HAMILTON (Theology).

Hockey Club.

President :
WM. WALSH (Med.).

Sec.-Treasurer :
E. IRVING (Med.).

University Lawn Tennis Club.
Secy. : C. F. MARTIN, B.A.

McGill Cricket Club.
Secy. : F. W. HIBBARD, B.A., B.C.L.

DELTA SIGMA SOCIETY.

ESTABLISHED 1884.

President : Louise C. Smith.

Vice-President : Ethelwyn Pitcher.

Secretary-Treasurer : Mary LeRossignol.

Assistant-Secretary : Margaret Craig.

Committee : Misses McGregor, James, Monk.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

ESTABLISHED 1887 (AS THEODORA SOCIETY).

Principal object for the present, the diffusion of information respecting Christian Missions, and the cultivation of a Missionary spirit. Open for membership to Students of the Donalda Special Course for women.

President : Eva Moffatt, B.A.

Vice-President : Helen Lyman.

Secretary-Treasurer : Agnes James.

Assistant Sec.-Treas. : Jennie Parmelee.

Committee : Misses Pattison, K. Campbell, Ballantyne, Brown, C. G. Seymour.

GLEE CLUB.

ESTABLISHED 1887.

President: Eva Moffatt, B.A.

Secretary-Treasurer : Mabel Evans.

Committee: Misses Leach, Reay, Murphy.

McGILL UNIVERSITY MUSICAL ASSOCIATION.

Honorary President.....SIR WILLIAM DAWSON, LL.D.

" *Secretary*.....B. J. HARRINGTON, Ph.D.

" *Treasurer*.....J. C. CAMERON, M.D.

OFFICERS FOR SESSION 1891-92.

President.....PEERS DAVIDSON, B.A.

Secretary.....S. S. D. CARMICHAEL.

Treasurer.....J. M. MACGREGOR.

Instructor.....PROF. WM. BOHRER.

Devoted to voice culture and to the practice of college and other songs. Membership open to all Students in the University. Annual fee $2.00. Meetings of one hour and a half held weekly during the college session.

BENEFACTORS OF

McGill University, Montreal.

I. *Endowments and Subscriptions of the University and of the Faculty of Arts.*

1. ORIGINAL ENDOWMENT, 1811.

THE HONORABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money unto the "Royal Institution for the Advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of His Majesty, King George the Third, to erect and establish a University or College, for the purpose of Education and the advancement of learning, in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended; requiring that one of the Colleges to be comprised in the said University should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above-mentioned property was estimated at the date of the bequest at.....$120,000

2. UNIVERSITY BUILDINGS, ETC.

THE WILLIAM MOLSON HALL, being the west wing of the McGill College buildings, with the connecting Corridors and Class Rooms, was erected in 1861, through the munificent donation of the founder whose name it bears.

THE PETER REDPATH MUSEUM, the gift of the donor whose name it bears, was announced by him as a donation to the University in 1880, and was formally opened to the public, August, 1882.

THE WILLIAM C. McDONALD Physics building, the gift of William C. McDonald, Esq., announced by him as a gift to the University in 1890.

Lot for University building adjoining the College grounds, presented by J. H. R. Molson,—$42,500.

3. THE DONALDA ENDOWMENT FOR THE HIGHER EDUCATION OF WOMEN.

This endowment, given by the Honorable Sir Donald A. Smith of Montreal, is for the education of women in the subjects of the Faculty of Arts, up to the standard of the examination for B.A., in classes wholly separate, to constitute a separate Special Course or College for women,—$120,000.

4. ENDOWED CHAIRS, ETC.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, endowed by the Honorable John Molson, Thomas Molson, Esq., and William Molson, Esq., —$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, endowed by Peter Redpath, Esq.,—$20,000.

The Logan Chair of Geology, in 1871, endowed by Sir W. E. Logan, LL.D., F.R.S. and Hart Logan, Esq.,—$20,000.

The John Frothingham Chair of Mental and Moral Philosophy, in 1873, endowed by Miss Louisa Frothingham,—$20,000.

The Major Hiram Mills Chair of Classics, in 1882, endowed by the last will of the late Major Hiram Mills of Montreal,—$42,000.

The David J. Greenshields Chair of Chemistry and Mineralogy, in the Faculties of Arts and Applied Science, in 1883, endowed by the last will of the late David J. Greenshields, Esq., of Montreal, with the sum of $40,000, half of which is devoted to the Faculty of Arts.

The William C. McDonald Chair of Physics, in 1890, endowed by William C. McDonald, Esq.,—$50,000.

The John Frothingham Principal Fund, to be invested for the endowment of the Principalship of the University; founded by the Rev. Frederick Frothingham and Mrs. J. H. R. Molson,—$40,000.

5. EXHIBITIONS AND SCHOLARSHIPS.

The Jane Redpath Exhibition, in the Faculty of Arts, $100 annually—founded in 1868 by Mrs. Redpath, of Terrace Bank, Montreal, and endowed with the sum of $1,667.

The McDonald Scholarships and Exhibitions, 10 in number, in the Faculty of Arts—founded in 1871, and endowed in 1882 with the sum of $25,000, by William C. McDonald, Esq.—Annual value, $1,250.

The Charles Alexander Scholarship, for Classics—founded in 1871 by Charles Alexander, Esq.—Annual value, $120.

The Barbara Scott Scholarship for Classical Language and Literature—founded by the last will of the late Miss Barbara Scott of Montreal, in the sum of $2,000, in 1884.—Annual value, $100.

The George Hague Exhibition—founded in 1881 in the Faculty of Arts.—Annual value $125.

The Major Hiram Mills Medal and Scholarship—in the Faculty of Arts, founded by the will of the late Major Hiram Mills of Montreal, and endowed with the sum of $1,500.—Annual value $75.

T. M. Thompson, Esq.—$250 for two Exhibitions in September, 1871; $200 for two Exhibitions in 1872,—$450.

Rev. Colin C. Stewart—for the "Stewart Prize in Hebrew,"—$60.

The Taylor Scholarship—founded in 1871, by T. M. Taylor, Esq.—Annual value $100—terminated in 1878.

Professor Alexander Johnson—for Scholarship for 3 Sessions, terminated 1886-7,—$350.

Her Majesty's Commission for the Exhibition of 1851—Nomination Scholarship, value £150 annually, tenable for two years.

6. ENDOWMENTS OF MEDALS AND PRIZES.

In 1856 Henry Chapman, Esq., founded a gold medal, to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874, with the sum of $700.

In 1860 the sum of £200, presented to the College by H. R. H the Prince of Wales, was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal" was founded and endowed by Mrs. John Molson, of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course, to comprise and include the works of Shakespeare and the Literature of England, from his time to the time of Addison, both inclusive, and such other accessory subjects as the Corporation may from time to time appoint—was founded and endowed by citizens of Montreal, on occasion of the three hundredth anniversary of the birth of Shakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Logan, LL.D., F.R.S., F.G.S., &c.

In 1874 a Gold and Silver Medal were given by his Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts, and continued till 1878.

In 1875 the "Neil Stewart prize in Hebrew" was endowed by Neil Stewart, Esq., of Vankleek Hill, in the sum of $340.

In 1880 a Gold and Silver Medal were given by His Excellency the Marquis of Lorne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science; continued till 1883.

In 1883 a Gold, Silver and Bronze Medal were given by R. J. Wicksteed, Esq., M.A., LL.D., for competition in "Physical Culture" by Students in the Graduating Class and 2nd and 3rd years, who have attended the University Gymnasium.

In 1884 a Gold and a Silver Medal were given by His Excellency the Marquis of Lansdowne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science. Continued till 1888.

The "Charles G Coster Memorial Prize" for general proficiency—given by Colin H. Livingstone, Esq., B. A., founded in 1889.

7. SUBSCRIPTIONS TO GENERAL ENDOWMENT.

1856.

John Gordon McKenzie, Esq.	$2000	Charles Alexander, Esq	$600
Ira Gould, Esq	2000	Moses E. David, Esq	600
John Frothingham, Esq	2000	Wm. Carter, Esq	600
John Torrance, Esq	2000	Thomas Patton, Esq	600
James B. Greenshields, Esq.	1200	Wm. Workman, Esq	600
William Busby Lambe, Esq.	1200	Hon. Sir A. T. Galt	600
Sir George Simpson, Knight	1000	Hon. Luther H. Holton	600
Henry Thomas, Esq	1000	Henry Lyman, Esq	600
John Redpath, Esq.	1000	David Torrance, Esq	600
James McDougall, Esq	1000	Edwin Atwater, Esq	600
James Torrance, Esq	1000	Theodore Hart, Esq.	600
Hon. James Ferrier	1000	William Forsyth Grant, Esq	600
Harrison Stephens, Esq	1000	Robert Campbell, Esq	600
Henry Chapman, Esq	600	Alfred Savage, Esq	600
Honourable Peter McGill.	600	James Ferrier, jun., Esq.	600
John James Day, Esq.	600	William Stephen, Esq.	600
Thomas Brown Anderson, Esq.	600	N S. Whitney, Esq	600
Peter Redpath, Esq	600	William Dow, Esq	600
Thomas M. Taylor, Esq	600	William Watson, Esq	600
Joseph McKay, Esq	600	Edward Major, Esq	600
Donald Lorn McDougall, Esq.	600	Honourable Charles Dewey Day	200
Hon. Sir John Rose	600	John R. Esdaile, Esq	200

1871.

William Molson, Esq	$5000	T. W. Ritchie, Esq	$600
William C. McDonald, Esq	5000	Messrs. A. & W. Robertson.	600
Thomas Workman, Esq	5000	Messrs. Sinclair, Jack & Co	250
John Frothingham, Esq	5000	John Reddy, M.D.	100
J. H. R. Molson, Esq	5000	Wm. Lunn, Esq	100
John McLennan, Esq.	2000	Kenneth Campbell, Esq.	100
B. Gibb, Esq	600	R. A. Ramsay, Esq	100
W. Notman, Esq	600	William Rose, Esq	50

1881-82.

Hugh McLennan, Esq	$5000	O. S. Wood, Esq	$1000
G. A. Drummond, Esq	4000	J. S. McLachlan, Esq	1000
George Hague, Esq	3000	J. B. Greenshields, Esq. (London)	1000
M. H. Gault, Esq	2000	Warden King, Esq	1000
Andrew Robertson, Esq	1000	W. B. Cumming, Esq	1000
Robertson Campbell, Esq	1000	Mrs. Hew Ramsay	500
Sir J. Hickson, and Lady Hickson	1000	R. A Ramsay, Esq	500
Mrs. Andrew Dow	1000	H. H. Wood, Esq	500
Alexander Murray, Esq	1000	James Burnett, Esq	500
Miss Orkney	1000	Charles Gibb, Esq	500
Hector McKenzie, Esq	1000		

1883—84.

Edward Mackay, Esq.....$5000

8. SUBSCRIPTIONS FOR CURRENT EXPENSES, 1881-82.

Principal Dawson	$1000	Being	$1000
J. H. R. Molson, Esq	1000	Per annum, 5 years being	5000
George Stephen, Esq	1000	" "	5000
Hon. Donald A. Smith	1000	" "	5000
David Morrice, Esq	200	" "	1000
Messrs. Gault Brothers & Co	200	" "	1000
Messrs. A. S. & S. H. Ewing	200	" "	1000
Hon. Robert Mackay	300	Per annum, 2 years, being	600
Jonathan Hodgson, Esq	100	Per annum, 5 years, being	500
Geo. M. Kinghorn, Esq	100	" "	500
Thomas Craig, Esq	100	Per annum, 2 years, being	200
John Rankin, Esq	200	Being	200
John Duncan, Esq	200	"	200
Robert Benny, Esq	100	"	100
Miss E. A. Ramsay	100	"	100
Hugh Paton, Esq	50	For 2 years, being	100
George Brush, Esq	25	For 5 years, being	125
J. M. Douglas, Esq	50	Being	50
James Court, Esq	50	"	50
David J. Greenshields, Esq	300	"	300

1887-8.

John H. R. Molson, Esq	$1000	Per annum, 3 years, being	$3000
W. C. McDonald, Esq	1000	" " "	3000
Peter Redpath, Esq	1000	" " "	3000
Hon. Sir Donald A. Smith, K.C.M.G	1000	" " "	3000
Hon. Jas. Ferrier	500	" " "	1500
Sir Joseph Hickson	500	" " "	1500
Hugh McLennan, Esq	250	" " "	750
E. B. Greenshields, Esq	250	" " "	750
George Hague, Esq	250	" " "	750
John Molson, Esq	250	" " "	750
Samuel Finley, Esq	250	" " "	750

Mrs. Mackay,	1888-89	$100
Do	1889-90	100
Do	1890-91	100

II. *Endowments and Subscriptions for the Faculty of Applied Science.*

1. BUILDINGS, CHAIRS, ETC.

The William Scott Chair of Civil Engineering, in 1884, endowed by the last will of the late Miss Barbara Scott, of Montreal,—$30,000.

The David J. Greenshields Chair of Chemistry and Mineralogy, in the Faculties of Arts and Applied Science, in 1883, endowed by the last will of the late David J. Greenshields, Esq., of Montreal, with the sum of $40,000, half of which is devoted to Faculty of Applied Science.

The Thomas Workman Department of Mechanical Engineering — founded under the last will of the late Thomas Workman Esq., and endowed with the sum of $117,000. The sum of $60,000 for the maintenance of a Chair of Mechanical Engineering, with the assistance, shops, machinery and apparatus necessary thereto, $57,000 to be expended in the provision of necessary buildings, machinery and apparatus. Any balance of this to be added to the invested endowment for the maintenance of the said Department.

William C. McDonald, Esq., toward erection of Thomas Workman Workshops, $20,000.

The William C. McDonald Engineering Building—announced by the donor as a gift to the University in 1890, and now in process of erection.

The William C. McDonald Chair of Electrical Engineering—endowed by William C. McDonald, Esq., with the sum of $40,000.

Subscriptions for Lectureship in Mining and Metallurgy.

R. B. Angus				$2000
Miss Benny				1000
Mrs. Dow				1000
Sir A. T. Galt				1000
Hugh McLennan				1000
Sir Wm. Dawson	$500 a year	for 3 years		1500
R. G. Reed	500	"	"	1500
Alex. Stewart (London, Eng.)	500	"	"	1500
Dr. T. E. Brainerd	250	"	"	750
E. K. Green	250	"	"	750
Peter Lyall	250	"	"	750
H. & A. Allan	250	"	"	750
A. T. Gault	250	"	"	750
Hector McKenzie	250	"	"	750
F. A. Dawes	250	"	"	750
James Ross	200	"	"	600
J. Duncan	100	"	"	300
Alex. Robertson	100	"	"	300
G. Hague	100	"	"	300
J. Hodgson	100	"	"	300
A. A. Ayer	83.33	"	"	250
James Moore	66.66	"	"	200
Ames, Holden & Co	50	"	"	150
G. W. Reid	33 33	"	"	100
T. A. Dawes	250	"	"	750
				$18,250

2. EXHIBITIONS AND SCHOLARSHIPS.

The Scott Exhibition—founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with the sum of $1,100, subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Faculty of Applied Science —Annual value $60.

THE BURLAND SCHOLARSHIP—founded 1882, by J. H. Burland. B. A. Sc., $100 for a Scholarship in Applied Science, for three years, being $300.

HER MAJESTY'S COMMISSION for the Exhibition of 1851—Nomination Scholarship, value £150 annually, tenable for two years.

3. MEDALS AND PRIZES.

In 1880 a Gold and Silver Medal were given by His Excellency the Marquis of Lorne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science; continued till 1883.

In 1883 a Gold, Silver and Bronze Medal were given by R. J Wicksteed, Esq., M.A., LL.D., for competition in "Physical Culture" by Students in the Graduating Class and 2nd and 3rd years, who have attended the University Gymnasium.

In 1884 a Gold and a Silver Medal were given by His Excellency the Marquis of Lansdowne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science. Continued till 1888.

In 1885 the British Association Gold Medal, for competition in the Graduating class in the Faculty of Applied Science, was founded by subscription of members of the British Association for the Advancement of Science, and by gift of the Council of the Association, in commemoration of its meeting in Montreal in the year 1884.

In 1888 a Gold and a Silver Medal were given by His Excellency Lord Stanley, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science.

4. ENDOWMENTS AND SUBSCRIPTIONS FOR MAINTENANCE OF FACULTY OF APPLIED SCIENCE.

Endowment Fund.

Daniel Torrance, Esq.	$5000
George Moffatt, Esq.	1000
Charles J. Brydges, Esq.	1000
Graduates Endowment Fund—Class 1890—$70.00 a year for 5 years	330

Annual Subscriptions, 1871–1879.

Hon. James Ferrier (per annum, for 10 years)	$100
Peter Redpath, Esq. (per annum, for 10 years)	400
John H. R Molson, Esq. (per annum, for 10 years)	400
George H. Frothingham, Esq. (per annum, for 7 years)	400
T. James Claxton, Esq. (per annum, for 6 years)	100
Donald Ross, Esq. (per annum, for 5 years)	$ 50
Miss Mary Frothingham (per annum, for 3 years)	400
H. McLennan, Esq (per annum, for 5 years)	100
A. F. Gault, Esq. (do do)	100
Gilbert Scott, Esq., for 2 years	100
Joseph Hickson, Esq., do	100
Principal Dawson, do	300
His Excellency the Marquis of Lorne	500
Mrs. Redpath (Terrace Bank)	100

Toward Maintenance of Engineering Department.

W. C. McDonald, Esq.	$10,000

To provide lectures in Mechanical and Sanitary Engineering.

E. B. Greenshields, Esq	$ 50
J. E. Bovey, Esq	50
Professor H. T. Bovey	61
Jeffrey H. Burland, B.A.Sc., $100 for 2 years	200
Smaller amounts	40

Chair of Practical Chemistry.

Hon. C. Dunkin, M P	$1200	P. Redpath, Esq.	$ 226
Principal Dawson	1200		

Class Rooms for Faculty of Applied Science, 1888.

John R. Molson, Esq	$3000
W. C. McDonald, Esq	3000
W. C. McDonald, Esq. (for advertising)	675

Surveying and Geodetic Apparatus.

W. C. McDonald, Esq	1500

---

5. LIST OF SUBSCRIBERS AND DONORS TO THE EQUIPMENT OF THE NEW ENGINEERING BUILDINGS OF McGILL UNIVERSITY, TO MAY, 1891.

Bell Telephone Co.
Bishop, Geo.
Birks, Henry
Bremner, A.
Brush, G.
Blackwell, K.
Burland, G. B.
Burland, J. H.
Campbell, K.
Campbell Tile Co. (Eng.), per Jordan & Locker
Chanteloup, F. (late)
Chadwick, E.
Crosby Steam Valve Co. (Boston)
Date, John
Drysdale, D.
Drysdale, W.
Ewan, A.
Dominion Barbed Wire Co., per F. Fairman
Frothingham & Workman
Gardner, W. S.
Gardner, R. W., & Son
Garth & Co.
Gower, W. E.
Graham, Hugh
Grier, G. A.
Gurney, E. & C., per F. Massey
Hearn & Harrison, per L. Harrison
Hersey, R.
Hodgson, Jonathan
Holden, A.
Hughes & Stephenson
Hutton, W. H.
Ives, H. R.
Jordan & Locker
Kennedy, John
Kennedy, W., Owen Sound
Kerr, R. & W.
Knight Hydraulic Co., Cal.
Lawrie, J., & Bro.
Macpherson, A.
McCarthy D. & J. (Sorel)
McDonald, Mrs J.
McLaren, D. W.
McNally, W., & Co.
Miller Bros. & Toms
Mitchell, Robert
Nalder Bros. & Co., England
Nicholson P.
Nightingale, H.
Norton Emery Wheel Co. (Worcester, Mass.)
Notman, W.
Ogilvie, W. W.
Parker, Moses
Pillow, J. A.
Prowse, G R.
Safford Radiator Co. (Toronto)
Ramsay, A., & Son
Reford, R
Rathbun, E. W., Deseronto
Redpath, Mrs.
Reed, G. W.
Reid, R. G.
Reid, Robert
Renouf, E. M.
Robertson, James

Ross, James
Sadler, G. W.
Scholes, Francis
Scovill Manufacturing Co.
Shearer, James
St. George, P. W.
Tees & Co.
Twyford & Co. (Eng.), per Jordan & Locker
Walker James, & Co.
Bertram John, & Sons (Dundas)
The Edison General Electric Co. (Canada and New-York)
The Pelton Water Power Co., San Francisco
The Thomson-Houston International Electric Co. (Boston)
The Whittier Machine Co. (Boston)
The B. F. Sturtevant Co. (Boston)
The Blake Manufacturing Co. (New York and Boston)
The Royal Electric Co.
Rutherford, W.
Roberts, George
Carsley, S.
Brodie & Harvie
Joyce, A.
Sheppard, C.
Ashton Valve Co. (Boston)
Goodhue Co.
Fort Wayne Co. (Indiana)
Wm. Slater
Morton, Phillips & Co.

Details will be given in a future report.

III. *Endowments and Subscriptions in aid of the Faculty of Medicine.*

1. LEANCHOIL ENDOWMENT.

Sir Donald A. Smith, K.C.M.G.....$50,000

2. CAMPBELL MEMORIAL ENDOWMENT—$63,000.

Established to commemorate the services rendered to the Faculty during 40 years by the late Dean George W. Campbell, M.D., LL.D.

Mrs. G. W. Campbell	$2000	Hector McKenzie, Esq.	1000
H. A. Allan, Esq.	1500	Thomas Workman, Esq.	1000
Sir D. A. Smith	1500	Hugh McLenan, Esq.	1000
Sir George Stephen, Bart.	1000	O. S. Wood, Esq.	1000
R. B. Angus, Esq.	1000	James Burnett, Esq.	500
George A. Drummond, Esq.	1000	Andrew Robertson, Esq.	500
Alex. Murray, Esq.	1000	Robt. McKay, Esq.	500
Robt. Moat, Esq.	1000	John Hope, Esq.	500
W. C. McDonald, Esq.	1000	Alex. Urquhart, Esq	500
A friend	1000	E. K. & G. A. Greene, Esqrs.	500
Duncan McIntyre, Esq	1000	R. A. Smith, Esq	500
Alex. Buntin, Esq.	1000	George Hague, Esq	500
A. F. Gault, Esq	1000	J. K. Ward, Esq.	500
M. H. Gault, Esq.	1000	Warden King, Esq.	500
G. W. Stephens, Esq.	1000	John Sterling, Esq.	500
James Benning, Esq.	1000	John Rankin, Esq	500
R. P. Howard, M.D.	1000	Messrs. Cantlie, Ewan & Co.	500
Frank Buller, M.D.	1000	Robt. Reford, Esq	500
G. B. & J. H. Burland, Esqrs.	1000	Messrs. J. & W. Ogilvie	500
Miss Elizabeth C. Benny	1000	Randolph Hersey, Esq.	500
J. C. Wilson, Esq	1000	John A. Pillow, Esq.	500
Mrs. John Redpath	1000	S. Carsley, Esq.	500
Hon. John Hamilton	1000	D. C. MacCallum, M.D.	500
Miss Orkney	1000	Messrs. McLachlan Bros.	500
Hugh McKay, Esq.	1000	Messrs. S. Greenshields, Son & Co.	500

Jonathan Hogdson, Esq.	500
Duncan McEachran, Esq., F. R. C.V.S	500
Geo Ross, M D	500
T. G. Roddick, M.D.	500
Wm. Gardner, M.D	500
G P. Girdwood, M.D	500
G. E. Fenwick, M.D.	500
Alex. Ramsay, Esq	500
Messrs. Cochrane, Cassils & Co.	500
Sir Joseph Hickson	500
Allan Gilmour, Esq. (Ottawa)	500
R. W. Shepherd, Esq.	500
Miles Williams, Esq	300
Chas. F. Smithers, Esq	250
John Kerry, Esq	250
A. Baumgarten, Esq	250
R. W. Elmenhorst, Esq	250
W. F. Lewis, Esq	250
Geo. Armstrong, Esq	250
J. M. Douglas, Esq	250
Messrs. H. Lyman, Sons & Co.	250
William Osler, M.D	250
F. J. Shepherd, M.D.	250
Benj. Dawson, Esq	200
R. Wolff, Esq	150
James Stuart, M.D	150
A. T. Paterson, Esq	100
H. W. Thornton, M.D. (New Richmond, Q.)	100
M. E. David, Esq	100
C. B Hanvey, M.D. (Yale, B.C).	100
D. Cluness, M D.(Nanaimo, B.C.)	100
W. Kinlock, Esq	100
Hua & Richardson	100
Mrs. Cuthbert (New Richmond, Q.)	100
J. M. Drake, M.D	100
Hugh Paton, Esq	100
R. T. Godfrey, M.D	100
T. A. Roger, M.D	100
W. A. Dyer, Esq	100
Geo Wood, M.D. (Faribault, Minn.)	100
A. A. Browne, M.D	100
George Wilkins, M.D.	100
R. L. MacDonnell, M D	100
Joseph Workman, M.D. (Toronto)	50
Hon. Sir A. T. Galt	50
Henry Lunam, B.A., M.D (Campbelton, N.B)	50
R. J. B. Howard, M.D.	25
T. J. Alloway, M.D	25
Louis T. Marceau, M.D. (Napierville, Q.)	25
Griffith Evans, M.D. (Vet. Dept. Army)	25
J. J. Farley, M.D. (Belleville)	25
Henry R. Gray, Esq	25
J. E. Brouse, M.D. (Prescott)	20
R. F. Rinfret (Quebec)	20
Robt. Howard, M.D. (St. Johns)	20
Drs. J. & D. J. McIntosh (Vankleek Hill)	20
J. H. McBean, M.D	15
J. C. Rattray, M.D.(Cobden, O.)	10
E. H Howard, M.D. (Lachine)	10
J. W. Oliver, M D. (Clifton, O.)	10
D. A. McDougall, M.D. (Ottawa, O.)	10
A. Pousette, M.D. (Sarnia, O.)	10
A. Ruttan, M D. (Napanee, O.)	10
James Gunn, M.D.(Durham, O.)	10
J. McDiarmid, M.D. (Hensall, O.)	5
W. J. Derby, M.D.(Rockland, O)	5
J. Gillies, M.D. (Teeswater, O.).	5
J. B. Benson, M.D. (Chatham, N.B.)	5
L. A. Fortier, M.D. (St. David, Q.)	5
J. A. McArthur, M.D. (Fort Elgin, O.)	5
John Campbell, M.D. (Seaforth, O.)	5

3. MEDALS AND SCHOLARSHIPS.

In 1865 the "Holmes Gold Medal" was founded by the Medical Faculty as a memorial of the late Andrew Holmes, Esq, M.D., LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine, who should undergo a special examination in all the branches, whether Primary or Final.

In 1873 the "Sutherland Gold Medal" was founded by Mrs. Sutherland of Montreal, in memory of her late husband, Prof. William Sutherland, M.D., for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary Examinations.

The David Morrice Scholarship—in the subject of Institutes of Medicine, in the Faculty of Medicine—founded in 1881—value $100. (Terminated in 1883.)

4. LIBRARY, MUSEUM AND APPARATUS.

For the fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A. M., M.D.....	$1200	Robert Craik, M.D....	$200
W. E. Scott, M.D	200	Geo. E. Fenwick, M.D.....	200
Wm. Wright, M.D.....	200	Joseph M. Drake, M.D	200
Robert P. Howard, M.D	200	George Ross, M.A., M.D.....	50
Duncan C. MacCallum, M.D.....	200		

The Professors and Lecturers in the Summer Sessions of the Faculty of Medicine.....	Donation to Apparatus, Museum, Library, etc., of the Medical Faculty, 1887, $1,182; 1888, $1,023.	2205

For Physiological Laboratory of Medical Faculty, 1879.

Dr. Campbell.....	$100	Dr. Ross	$50
Dr. Howard.....	100	Dr. Roddick	50
Dr. Craik.....	100	Dr. Buller	50
Dr. MacCallum.....	100	Dr. Gardner.....	50
Dr. Drake.....	100	Dr. Osler.....	50
Dr. Godfrey.....	100		
Dr. McEachran, F.R.C.V.S.....	100		$ 950

Cameron Obstetrical Collections.

Dr. J. C. Cameron..... $10 000

IV. *Endowments and Subscriptions of the Faculty of Law.*

1. ENDOWED CHAIRS.

The Gale Chair, in the Faculty of Law, endowed by the late Mrs. Andrew Stuart (*née* Agnes Logan Gale) of Montreal, in memory of her father, the late Honorable Mr. Justice Gale,—$25,000; part received, May, 1890.

The William C. McDonald Law Faculty Endowment, founded by William C. McDonald, Esq. (1890)—$150,000.

2. MEDAL.

In 1865 the "Elizabeth Torrance Gold Medal" was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in Law, and more especially for the highest proficiency in Roman Law.

V. *Subscriptions and Donations for Special objects.*

1. FOR APPARATUS.

William Molson, Esq., Philosophical Apparatus, 1867.....	$ 500
John H. R. Molson, Esq., for the same.....	500
Peter Redpath, Esq., for the same.....	500
George Moffatt, Esq., for the same.....	250
Andrew Robertson, Esq., for the same.....	100
John Frothingham, Esq., for the same.....	100
David Torrance, Esq., for the same.....	100
	$2,000

A. Telescope and Astronomical Instrument, the gift of Charles T. Blackman, Esq, of Montreal, and called after his name.

Thos. J. Barron, B.A., Philosophical Apparatus	$ 50
J. H. R. Molson, Esq., Dynamo, Gas Engine and Fixtures	1792
A Lady, for the purchase of Mining Models	1000
Thos. McDougall, Esq., for the same	25
J. Livesey, Esq., through Dr Harrington, for the same	50
Geo. Stephen, Esq., for the same	50
Charles Gibb, B.A., donation for Apparatus in Applied Science	50
The Local Committee for the reception (1881) of American Society of Civil Engineers — For the purchase of appliances for the department of Civil Engineering in Faculty of Applied Science	475
Capt. Adams, Chemical Apparatus	10
J. H. Burland, B.A. Sc., Chemical Apparatus	25
Mrs. Redpath, Storage battery	400
W. C. McDonald, Esq, fittings of upper Chemical Laboratory	2075
The Local Committee of the British Association for the Advancement of Science, to found the British Association Apparatus Fund in the Faculties of Arts and Applied Science, in commemoration of the meeting of the Association in Montreal in 1884	1500

A. J. Lawson, a Dynamo.
Benjamin Dawson, 3 Microscopes.

2. FOR LIBRARY, MUSEUM AND LABORATORIES.

John Thorburn, for purchase of Books	$ 90	Mrs. H. G. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan shells	$233
Andrew Drummond, do for Applied Science	25	A Lady for Museum Expenses, in 1882	1000
T. J. Claxton, Esq., for purchase of Specimens for Museum	250		
A Lady for Museum Expenses, in 1883-4 and 1887	3000	Peter Redpath, Esq., for Improvements to Museum	1000
A friend for the purchase of specimens for the Museum	1900	The Graduates in Arts and Applied Science of 1885 for purchase of Books	31
Wm. Molson, Esq., for Library Fund	4000	Do of 1886	28
Wm. Molson, Esq., for Museum Fund	2000	The late R. A. Ramsay, Esq., Bequest for purchase of books.	1000
Hon. F. W. Torrance, for Mental and Moral Philosophy Book Fund	1000	John H. R. Molson for purchase of book on "Butterflies of Eastern U.S and Canada"	50
Mrs. Redpath, for the endowment of the Wm. Wood Redpath Library Fund	1000	Andrew Drummond, Esq. to Library Fund of Faculty of Applied Science	25
A Friend, by the Hon. F. W. Torrance	400	Sir Donald A. Smith, for purchase of books from the R. W. Boodle Library	200
Peter Redpath, Esq., for Museum Expenses, 1882, $1,000; '83, $1,000; '84, $1,000; '85, $1,000; '86, $1,000; '87, $1,000; '88, $1,000; '89, $1,000; '90, $1,000	9000	Ottawa Valley Graduates Society for binding books in the University Library	25

3. FOR A BUILDING FOR THE CARPENTER COLLECTION OF SHELLS, 1868.

Peter Redpath, Esq	$500	John H. R. Molson, Esq	100
William Molson, Esq	500	Sir Wm. E. Logan, Esq., F.R.S.	100
Harrison Stephen, Esq	100	John Molson, Esq	100
Robert J. Reekie, Esq	100	Thos Workman, Esq., M.P.	100

Geo. H. Frothingham, Esq	$100	Benaiah Gibb, Esq	50
Wm. Dow, Esq	100	Honorable John Rose	50
Thos. Rimmer, Esq	100		
Andrew Robertson, Esq	100		$2,200
Mrs. Redpath	100		

4. FOR THE ERECTION OF THE LODGE AND GATES.

William Molson, Esq	$100	John Frothingham, Esq	$100
John H. R. Molson, Esq	100	James A. Mathewson, Esq	100
William Workman, Esq	100	Peter Redpath, Esq	100
Joseph Tiffin, jr., Esq	100	G. H. Frothingham, Esq	100
Thos. J. Claxton, Esq	100	G. D. Ferrier, Esq	100
James Linton, Esq	100	Geo. W Warner, Esq	100
William McDougall, Esq	100	John Smith, Esq	100
Charles J. Brydges, Esq	100	Charles Alexander, Esq	100
George A. Drummond, Esq	100	J. Evans, Esq	100
Thomas Rimmer, Esq	100	Henry Lyman, Esq	100
William Dow, Esq	100		

5. FOR THE SUPPORT OF THE CHAIR OF BOTANY, 1883-84.

Principal Dawson	$500	Per annum, 5 years, being			$2500
Hon. Sir D. A. Smith	250	"	"	"	1250
J H. R. Molson, Esq	100	"	"	"	500
Mrs. J. H. R. Molson	100	"	"	"	500
G. Hague, Esq	100	"	"	"	500
Mrs. Redpath	100	"	"	"	500
Hugh McKay, Esq	100	"	"	"	500
Robert Moat, Esq	100	"	"	"	500
W. C. McDonald, Esq	100	"	"	"	500
Charles Gibb, Esq	50	"	"	"	250
Miss Orkney	50	"	"	"	250
Robert McKay, Esq	50	"	"	"	250
Mrs. Molson	50	"	"	"	250
Mrs. John Molson	50	"	"	"	250
John Stirling, Esq	50	"	"	"	250
Warden King, Esq	50	"	"	"	250
Miss Hall	50	"	"	"	250
Robert Angus, Esq	50	"	"	"	250
D. A. P. Watt, Esq	50	"	"	"	250
Hugh McLennan, Esq	25	"	"	"	125
Sir Joseph Hickson	10	"	"	"	50
Mrs. Philips	10				10

6. SUBSCRIPTIONS TO BOTANICAL GARDEN, 1890-91.

Hugh McLennan	$100	Jonathan Brown	$100
Gilman Cheney	100	Jonathan Hodgson	100
James Johnston	100	H. Shorey	50
James Slessor	100	J. S. Shearer	50
A friend	100	Geo. Sumner	25
Hugh Graham	100	A. Ramsay & Co	25
A. F. Gault	100	Garth & Co	25
W. T. Costigan	100		

7. IN AID OF THE CHAIR OF HEBREW, 1889.

Warden King, Esq	$50	Per annum,	3	years,	being	$150
Principal Sir William Dawson	50	"	"	"		150
Hon. Hugh Mackay	50	"	"	"		150
A. F. Gault, Esq	25	"	"	"		75
Geo. Hague, Esq	25	"	"	"		75
T. A. Dawes, Esq	25	"	"	"		75
S. Carsley, Esq	25	"	"	"		75

8. FOR MUSICAL INSTRUCTION IN THE DONALDA SPECIAL COURSE FOR WOMEN.

Hon. Sir Donald A. Smith,	session,	1889-90 $200
" " "	"	1890-91 200

9. FOUNDER'S TOMB.

R. A. Ramsay, M.A., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill $150

9. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannah Willard Lyman Memorial Fund," contributed by subscription of former pupils of Miss Lyman, and invested as a permanent endowment, to furnish annually a Scholarship or Prize in a "College for Women" affiliated to the University, or in classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1,100.

10 SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books, presented by Peter Redpath, Esq., of Montreal, 2368 Volumes.
2. The Robson Collection of works in Archæology and General Literature, presented by Dr. John Robson, of Warrington, England, 3436 Volum s.
3. The Charles Alexander Collection of Classical Works, presented by C. Alexander, Esq., of Montreal, 221 Volumes.
4. Frederick Griffin. Esq., Q.C., Collection of Books, being the whole of his Library, bequeathed by his will, 2695 Volumes.
5. The Hon. Mr. Justice MacKay, Collection of Books, being the whole of his Library, 2007 Volumes
6. The "T. D. King Shakespeare Collection," presented by the Hon. Sir. Donald A. Smith and W. C. McDonald, Esq., of Montreal, being 214 Volumes.

11. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium, presented by the late Andrew F. Holmes, M.D.
2. The Carpenter Collections of Shells, presented by the late P. P. Carpenter, Ph. D.
3. The Collection of Casts of Ivory Carvings issued by the Arundel Society, presented by Henry Chapman, Esq.
4. The McCulloch Collection of Birds and Mammals, collected by the late Dr. M. McCulloch, of Montreal, and presented by his heirs.
5. The Logan Memorial Collections of Specimens in Geology and Natural History, presented by the heirs of the late Sir W. E. Logan, LL.D., F.R.S.
6. The Dawson Collection in Geology and Palæontology, being the Private Collections of Principal Dawson, presented by him to the Museum.

7. The Portrait of Peter Redpath, Esq., painted by Mr. Sidney Hodges of London, and presented by Citizens of Montreal.

8. The Bowles Collection of Lepidoptera, presented by W. C. McDonald, Esq., and J. H. Burland, Esq.

9. R. Morton Middleton, Jr., London, Eng. Collection of Plants.

(See also "List of Donations to the Library and Museum," printed annually in the Calendar and Report to the Museum.)

VI. *The Graduates' Fund.*

1. THE FUND FOR ENDOWMENT OF THE LIBRARY.

The Graduates' Society of the University, in 1876, passed the following Resolution:—

Resolved:—"That the members and graduates be invited to subscribe to a "fund for the endowment of the Libraries of the University; said fund to be in- "vested and the proceeds applied under the supervision of the Council of the "Society in annual additions to the Libraries; an equitable division of said pro- "ceeds to be made by the Council between the University Library and those of "The Professional Faculties."

In terms thereof the following subscriptions have been announced to date, May 1st, 1889. They are payable in one sum, or in instalments, as subscribers have elected.

Alphabetically arranged.

Baynes, O'Hara, B.C.L.	$ 05	Lyman, F. S., B.A., B.C.L	$ 50
Bethune, M.B., M.A., B.C.L.	50	Lyman, H. H., M.A	100
Blackader, Alex. D., B.A., M.D.	50	Mackenzie, Fred., B.C.L	100
Burland, J. H., B.A.Sc	120	Maclaren, J. J., M.A., D.C.L.	100
Browne, A. A., B.A, M.D.	50	Macleod, C. H., Ma.E	$50
Cline, J. D., B.A., M.D	25	Macmaster, D., B.C.L	100
Cushing, Lemuel, LL.D., B.C.L.	25	Marler, Wm. DeM., B.A., B.C.L.	125
Dougall, J. R. M.A.	50	McCord, D. R, M.A., B C.L.	100
Ells, R. W., LL.D.	50	McGregor, James, LL.D.	80
Empson, Rev. J., M.A.	25	Molson, Wm., M.D.	100
Gardner, Wm., M.D.	100	Osler, Wm., M D.	100
Gibb, Charles, B.A.	50	Ramsay R. A., M.A., B.C.L.	100
Gilman, F. E., LL.D., B.C.L.	100	Rexford, Rev. E. I., B.A.	50
Gould, C. H., B.A.	100	Robertson, Alex., B.A.	100
Hall, J. S., jun., B.A., B.C.L.	50	Robins, S. P., LL.D.	50
Hall, Rev. W., M.A.	10	Roddick, T. G., M.D	100
Harrington, B. J., B.A., Ph.D.	50	Ross, George M.A., M.D.	100
Holton, Edward, B.C.L	100	Shepherd, J. F., M.D	100
Hutchinson, M., B.C.L.	5	Torrance, J. F., B.A., B.A. Sc.	100
Keller, F. J., B.C.L	25	Trenholme, N. W., M.A., D.C.L.	100
Kelley, F. W., B.A., Ph.D.	100		
Laing, Rev. R., M.A.	100	Total to date	$3,090

2. THE DAWSON FELLOWSHIP FOUNDATION.

The Graduates' Society of the University, in 1880, and in commemoration of the completion by Dr. Dawson of his twenty-fifth year as Principal, resolved to raise, with the assistance of their friends, a Fund towards the Endowment of the Fellowship, under the above name.

Details of the scheme can be had from the Treasurer, C. H. McLeod, Esq, Ma.E. The following subscriptions have been announced to date, May 1st, 1889. They are payable in one sum, in instalments, without interest or with interest till payment of capital, as subscribers have elected.

Alphabetically arranged.

Abbott, H., B.C.L.	$ 60	Lyman, H. H., M.A.	$ 100
Archibald, H., B.A.Sc.	20	Lyman, A. C., M.A., B.C.L.	50
Bethune, M. B., M.A., B.C.L.	50	McCormick, D., B.C.L.	100
Carter, C. B., B.C.L.	100	McGibbon, R. D., B.A., B.C.L.	100
Cruickshank, W. G., B.C.L.	100	McGoun, A., jun., M.A., B.C.L.	50
Dawson, W. B., M.A., Ma.E.	50	McLennan, J. S., B.A.	100
Dougall, J. R., M.A.	250	Ramsay, R. A., M.A., B.C.L.	50
Gibt, C., B.A.	100	Spencer, J. W., B.A Sc, Ph.D.	50
Hall, Rev. Wm., M.A.	100	Stephen, C. H., B.C.L.	100
Hall, J. S., jun., B.A., B.C.L.	100	Stewart, D. A., B.A.Sc.	20
Harrington, B. J., B.A., Ph.D.	50	Stewart, J., M.D.	60
Hutchinson, M., B.C.L.	400	Tait, M. M., B.C.L.	100
Kirby, J., LL.D., D.C.L.	50	Taylor, A. D., B.A., B.C.L.	100
Krans, Rev. E. H., M.A., LL.D.	100	Trenholme, N. W., M.A., D.C.L.	400
Leet, S. P., B.C.L.	100		
Lighthall, W. D., M.A., B.C.L.	100	Total to date	$3,010

University School Examinations.

1892.

FOR CERTIFICATES OF THE UNIVERSITIES AND THE TITLE OF ASSOCIATE IN ARTS.

HELD UNDER THE SUPERINTENDENCE OF McGILL UNIVERSITY, MONTREAL, AND THE UNIVERSITY OF BISHOP'S COLLEGE, LENNOXVILLE, AND RECOGNIZED BY THE PROTESTANT COMMITTEE OF THE COUNCIL OF PUBLIC INSTRUCTION.

These Examinations are held in Montreal and at Lennoxville; and local centres may be appointed elsewhere on application to the Principal of either University, accompanied with the names of satisfactory Deputy Examiners, and guarantee for the payment of necessary expenses.

The Examinations are open to Boys or Girls from any Canadian school.

PART I.—ORDINARY A.A.

SUBJECTS OF EXAMINATION.

I. PRELIMINARY SUBJECTS.

(100 marks each.)

English Reading.
Writing.
English Dictation.
*English Grammar, including easy Analysis.**
Arithmetic (all the ordinary rules, including square root and a knowledge of the Metric System).
Geography (acquaintance with the maps of each of the four continents, and of British North America).
British History and *Canadian History.*
New Testament History † (Gospels and Acts, as in Maclear).

---

* In the Analysis it is expected that the following scheme will be used: (1) Subject. (2) Attributive Adjuncts of the Subject. (3) Predicate. (4) Complement of the Predicate. (5) Object. (6) Attributive Adjuncts of the Object. (7) Adverbial Adjuncts of the Predicate (Extension). (8) Adverbial Adjuncts of the Complement of the Predicate. In the Analysis of a Complex Sentence, the sentence must be analysed as a whole, and then the clause or clause, which occur in it, in detail.

† Candidates will be exempted from examination in this subject only if their parents or guardians make written objection thereto.

II. Optional Subjects.

Section 1.—Languages.

Latin :—

Caesar —Bell. Gall., Bk. I. Virgil.—Aeneid, Bk. I. Latin Grammar and Prose Composition (Collar's Practical Latin Composition, Part III, or an equivalent.)	200 marks.

Greek :—

Xenophon.—Anabasis, Bk. I. Homer.—Iliad, Bk. IV. Greek Grammar.	200 marks.

French :—

Grammar and Dictation. Darey's Lectures Françaises (selected extracts). Re-translation, English into French.	100 marks.

German :—

Grammar, Adler's Reader, Sections I. and II. Translation from German into English.	100 do

Section 2.—Mathematics.

Geometry :—

Euclid, I., II., III, with easy Deductions,.....	100 do

Algebra :—

Elementary Rules, Involution, Evolution, Fractions, Indices, Surds, Simple and Quadratic Equations of one or more unknown quantities.	100 do

Plane Trigonometry.

(As in Hamblin Smith, pp. 1-100, omitting Ch. XI).	100 do

Section 3.—English.

The English Language :—

Meiklejohn's English Language, Pts. I., II., III. Trench's Study of Words.	100 do

English Literature :—

Meiklejohn's English Language, Pt. IV. Shakespeare, Julius Caesar. Scott's Lady of the Lake.	100 do
History.—(As in Primers of Greece and Rome, and Collier's Great Events).....	100 do
Geography.—Physical, Political and Commercial.....	100 do

Section 4.—Natural and Physical Sciences, etc.

Zoology (as in Nicholson's Introductory Text-Book).....	100	do
*Botany** (as in Spotton's High School Botany, with Analysis according to the method of Nelson's "Herbarium and Plant Descriptions.").....	100	do
Chemistry (as in Remsen's Elements of Chemistry, pp. 1 to 160).	100	do
Physiology and Hygiene (as in Cutter's Intermediate).....	100	do
Physics (as in Gage and Fessenden's High School Physics, Chapters I., II., III.).....	100	do
Geometrical and Freehand Drawing.....	100	do

Geometrical.—Vere Foster, R^1; R^2; R^3, problems 119 to 129.

Freehand.—Rules of Perspective, Drawing from the object (as in the Dominion Freehand Drawing Books, numbers 1 to 5, inclusive.)

REGULATIONS.

1. To obtain the Certificate of Associate in Arts, Candidates must pass in all the Preliminary subjects, and also in any six of the Optional subjects, provided that the six include one subject at least from each of the four Sections.

2. In addition to the six Optional subjects selected for passing, Candidates may take other Optional subjects, but the total possible number of marks obtainable in all the Optional subjects chosen must not exceed 1100.

3. Candidates will not be considered as having passed in any subject, unless they have obtained at least 34 per cent. of the total number of marks obtainable in that subject.†

4. The total number of Marks gained by every Candidate in the Optional subjects shall be added up, and the Candidates arranged in order of merit in a printed list, at the close of the Examination, those who are over 18 years of age on the first day of June being in a separate list. No marks in any subject shall be counted, unless the Candidate has passed in that subject.

5. Candidates who obtain at least 67 per cent. of the marks in any Optional subject will be entitled to a certificate of creditable answering in that subject, provided they satisfy the conditions for Associate in Arts.

---

* In connection with the Botany examination, credit will be given for collections of mounted specimens made in accordance with Penhallow's Guide to the Collection and Preservation of Plants. The Head Teacher of each school will forward with the answers a specimen from each pupil's collection, and also (on a furnished form) a detailed statement as to the collections made. Not more than 50 specimens will be expected to constitute a collection, but marks may be allowed *pro rata* for fewer.

†When (*e. g.*, in History, English Language, etc.) two or more books or subjects are prescribed for one examination it is necessary to pass in each. Candidates will not be allowed to pass in the Preliminary Grammar, unless they show a satisfactory knowledge of Syntax (Parsing, Analysis, and questions connected therewith). In Classics, at least one-third of the marks allotted to grammar must be obtained.

6. Candidates who pass in the subjects of the University Matriculation Examinations may, without further examination, enter the Faculties of Arts and Applied Science.

7. Candidates who fail, or who may be prevented by illness from completing their examination, may come up at the next examination without extra fee.

8. Candidates who pass in all the Preliminary subjects may at the next examination take the Optional subjects only, and without extra fee.

9. The Head Master or Mistress of each school must certify to the character and ages of the pupils sent up for examination.

10. The examinations will begin on Wednesday, June 1st, at 9 a.m.

11. Lists of the names, ages, and Optional subjects to be taken by the Candidates, together with the fee of $4 for each Candidate, must be transmitted to the Secretary, McGill University, Montreal,on or before May 1st. (Blank forms and copies of the Regulations will be furnished on application.)

Extracts from Darey's Lectures Françaises, for the examination of 1892.

Extracts beginning on pp. 10, 13, 15, 20, 32, 33, 37, 42, 47, 51, 56, 63, 68 74, 76, 85, 87, 92, 94, 99, 103, 110, 118, 125, 129, 133, 144, 149, 151, 156, 158, 162, 166, 169, 176, 179, 182, 196, 215.

NOTE 1.—No fees will be exacted for the examination of pupils of Academies under the control of the Protestant Committee; but in order to obtain the certificate from the Universities, the prescribed fee, viz.: $4.00, must be paid to the Secretary of the University Examiners.

Candidates who pass Grade II. of the Academy Course of Study will, in the following year, be exempted from the Preliminary Subjects of the A.A. Examination.

The complete regulations of the Protestant Committee of the Council of Public Instruction with reference to these examinations may be obtained on application, to the English Secretary, Department of Public Instruction, Quebec.

NOTE 2.—MATRICULATION SUBJECTS REFERRED TO IN REG. 6.

In Arts.—Greek, Latin, Geometry, Algebra, Arithmetic, English Dictation, English Grammar, British History. (Women may substitute French for Greek.)

In Applied Science.—Geometry, Algebra, Trigonometry, Arithmetic, English Dictation, English Grammar.

After entrance in Arts or Applied Science, French or German must be studied. In the former subject an entrance examination is required, but may be passed either in June or in September; Candidates who are unable to pass must study German after entrance. Women who omit Greek must pass the entrance examination in French, and afterwards study both French and German.

[Matriculation Examinations are also held at the opening of the University Session in September. See Calendars of the Universities.]

PART II.—ADVANCED A.A.

SUBJECTS OF EXAMINATION.

I. Preliminary Subjects.

As under Part I.

II. Optional Subjects.

Section 1.—Languages.

Latin :—

Virgil.—Aeneid, I.

Cicero.—In Catilinam, I. and II.

Grammar, Prose Composition (Collar's Practical Latin Composition, Parts III. and IV.), and Translation at sight from Caesar and Nepos

Greek :—

Xenophon.—Anabasis, I. and II.

Homer.—Iliad, IV., and Odyssey VII.

Grammar and Prose Composition (Abbott's Arnold's Greek Prose Composition, Exercises 1 to 25).

French :—

Lamartine, Jeanne d'Arc.

Molière, Le Bourgeois gentilhomme.

Translation at sight from French into English, and from English into French.

Grammar and Dictation.

German :—Similar to French (subjects will be announced later).

Section 2.—Mathematics.

Geometry :—

Euclid, Bks. I. to IV., Defns. of Bk. V., Bk. VI.

Algebra :—

To the end of Progessions.

Trigonometry :—

As in Hamblin Smith (the whole).

Section 3.—English.

The English Language :—

Lounsbury's History of the English Language.

Mason's English Grammar.

A composition.

English Literature:—

Meiklejohn's English Language, Pt. IV.
The Elizabethan Period (Morley's First Sketch).
Milton's Paradise Lost, Bks. I. and II.

History:—

Grecian History.—The Persian and Peloponnesian Wars.
Roman History.—From the Wars of Marius and Sulla to the death of Tiberius.
English History.—The Reformation and Puritan England, as in Green's Short History.

Section 4.—Natural and Physical Science, &c.

Botany.—Gray's Text Book.
General Morphology and Classification, Determination of Canadian species exclusive of Thallophytes. Distribution of Orders represented in Canada.

Chemistry.—Inorganic, as in Remsen's Elements.
Also, an examination in Practical Work.

Physics.—As in Gage and Fessenden's High School Physics.
Also, an examination in Practical Work.

Drawing.—Orthographic Projection, including Simple Penetrations, Developments and Sections, as in Davidson's Orthographic Projection.

REGULATIONS.

The Regulations of Part I., with the following modifications and additions, will apply to the advanced subjects: —

1. Candidates who pass in six of the advanced subjects (including one at least from each of the four Sections) will receive a Senior or Advanced A.A. certificate. The number of marks given to each subject will be the same as in Part I., and additional advanced subjects may be taken as in Reg. 2, Part I.

2. Candidates who fail in one or more of the subjects required for the advanced A.A. may, on the recommendation of the Examiners, be given an ordinary A.A. certificate.

3. The examinations in the advanced subjects will be held at the same time and in the same manner as those in the ordinary subjects. They will be open to all who have already passed in the preliminary subjects, whether they have taken the ordinary A.A. or not. The preliminary subjects must be taken either one or two years before the advanced subjects.

4. Candidates who pass the advanced examinations in Greek, Latin, Geometry, Algebra, and English Language* shall be considered as having passed the Higher Matriculation Examination of the First year in Arts, McGill University.

5. Candidates must, before May 1st, give notice of intention to present themselves for the examination, specifying the optional subjects in which they wish to be examined.

6. The ordinary fee of $4.00 † must be paid before taking the preliminary subjects, and an additional fee of $10 00 at the time of making application for the advanced examinations.

---

* French as in Part I. Note 2.

† Except in the case of Candidates from Academies under the control of the Protestant Committee of the Council of Public Instruction.

School Examinations.

STANDING IN THE EXAMINATIONS, 1891.

ASSOCIATES IN ARTS.

I. Candidates under 18 years of age.

No.			
1.	Samuel G. Archibald (High School, Montreal),	913	Marks.
79.	Carroll D. Dyke (Coaticook Academy),	890	"
9.	Morell McK. Duff (High School, Montreal),	855	"
2.	Edgar N. Armstrong (High School, Montreal),	843	"
21.	Charles E. Von Barnveld (High School, Montreal),	816	"
23.	Lillian M. Carnochan (Girls' High School, Montreal),	800	"
11.	Frank W. Fourney (High School, Montreal),	752	"
7.	George A. Campbell (High School, Montreal),	751	"
194.	Anna McAmmond (Stanstead Wesleyan College),	734	"
14.	Cecil C Pangman (High School, Montreal),	724	"
42.	George F. Gibsone (High School, Quebec),	723	"
218.	Isabella F. Frost (Waterloo Academy),	674	"
18.	Frederick T. Tooke (High School, Montreal),	669	"
50.	Bertha E. Clarke (Girls' High School, St. John, N.B.),	661	"
28.	Ethel M. Doull (Girls' High School, Montreal),	648	"
17.	Oswald Smyth (High School, Montreal),	645	"
33. 44.	Edith H. Locke (Girls' High School, Montreal), / William B. Taylor (High School, Quebec), } equal	639	"
22.	L. Ethel Armstrong (Girls' High School, Montreal),	619	"
190.	Jennie A. Anderson (Stanbridge E. Model School),	617	"
26.	Florence E. Cushing (Girls' High School, Montreal),	604	"
70.	Charles W. Woodworth (Bedford Academy),	595	"
8. 188.	Shirley Davidson (High School, Montreal), / Mary A. Rugg (Girls' Academy, Sherbrooke), } equal	583	"
102.	Edward D. Mansfield (Cowansville Academy),	582	"
199.	Rosa Whitney (Stanstead Wesleyan College),	577	"
10.	L. Aubrey Dyer (High School, Montreal),	575	"
12.	Melville Miller (High School, Montreal),	571	"
189.	Jessie M. Shirreffe (Girls' Academy, Sherbrooke),	564	"
25.	Annie A. Corneil (Girls' High School, Montreal),	557	"
3.	Frederick M. Becket (High School, Montreal),	542	"
27.	K. E. Louise Dawson (Girls' High School, Montreal),	541	"
56.	Elizabeth H. Roderick (Girls' High School, St. John, N.B.),	532	"
186.	William M. Steele (Boys' Academy, Sherbrooke),	518	"

59. Lizzie M. White (Girls' High School, St. John, N.B.), } equal 517 Marks.
104. M. Winnifred Boutelle (Danville Model School), }
16. William H. Robertson (High School, Montreal), 512 "
6. Anson H. Campbell (High School, Montreal), 510 "
88 Clara M. M. Bailey (Cookshire Model School), 508 "
142. Arthur J. White (Huntingdon Academy), 489 "
147. Maggie Hanran (Inverness Academy), 487 "
197. Ethelwynn M. Tweddell (Stanstead Wesleyan College), 483 "
84. Clara J. Trenholme (Coaticook Academy), 482 "
60. Laura R. Wilson (Girls' High School, St. John, N.B.), 474 "
159. Dean H. Pettes (Knowlton Academy), 471 "
178. Mary A. Whelen (Portage du Fort Model School), 470 "
53. Jessie M. Hayes (Girls' High School, St. John, N.B.), } equal 467 "
157. Beatrice M. McGowan (Knowlton Academy), }
94. Lillie A. McCaskill (Cookshire Model School), 466 "
201. William Chubb (St. Johns High School), 457 "
78. Algernon E. Doak (Coaticook Academy), } equal 454 "
81. Mamie M. McKenna (Coaticook Academy), }
156. May Marsh (Knowlton Academy), 449 "
38. Edith M. Woods (Girls' High School, Montreal), }
185. Wilkie B. McCaw (Boys' Academy, Sherbrooke), } equal 444 "
207. Percy C. Anderson (Sutton Model School), }
91. Evelyn A. Fraser (Cookshire Model School), 443 "
154. James A. Thompson (Inverness Academy), 436 "
180. Katie Armstrong (Shawville Academy), 435 "
158. Edith Moses (Knowlton Academy), 423 "
101. Morris Chas. Hutchins (Cowansville Academy), 421 "
66. Howard C. Symmes (Aylmer Academy), 414 "
175. Annie Beckett (Portage du Fort Model School), 403 "
127. Barbara J. Hamilton (Huntingdon Academy), 393 "
160. Lena Soules (Knowlton Academy), 391 "
200. Florence C. Campbell (High School, St. Johns), 382 "
126. Agnes May Gilmore (Huntingdon Academy), 371 "
110. Walter R. Hibbard (Dunham Model School), 364 "
111. Christina M. Beard (Gould Model School), 358 "
77. Emma G. Baldwin (Coaticook Academy), 350 "
162. Tina E. Traver (Knowlton Academy), 342 "
80. Luna E. Edwards (Coaticook Academy), 321 "
184. Leon J. Ball (Boys' Academy, Sherbrooke), 306 "
135. Mary E. Neville (Huntingdon Academy), 303 "

II. Candidates over 18 years of age.

146. Gardiner Grady (Inverness Academy), 828 "
58. Katherine H. Travis (Girls' High School, St. John, N.B.), } equal 714 "
193. W. Alfred Gustin (Stanstead Wesleyan College), }

46.	Ina S. Brown (Girls' High School, St. John, N.B.),	676	Marks.
69.	Nellie G. Sulley (Bedford Academy),	663	"
90.	Abegail J. Cairns (Cookshire Model School),	652	"
55.	Mary I. Jordan (Girls' High School, St. John, N.B.),	650	"
220.	Thomas J. Slack (Waterloo Academy),	629	"
181.	Ernest W. Hodgins (Shawville Academy),	610	"
116.	George D. Fuller (Granby Academy),	604	"
48.	Susan E. Cameron (Girls' High School, St. John, N.B.),	600	"
198.	Laura Vipond (Stanstead Wesleyan College),	572	"
68.	James E. Collins (Bedford Academy),	566	"
51.	Mary W. Davidson (Girls' High School, St. John, N.B.),	563	"
131.	Francis M. McNaughton (Huntingdon Academy),	559	"
124.	Alexander W. Cameron (Huntingdon Academy),	558	"
209.	Edward O. Dyer (Sutton Model School),	554	"
52.	Alice Gibson (Girls' High School, St. John, N.B.),	539	"
106.	Thomas Donnelly (Danville Model School),	515	"
187.	Maude M. Johnson (Girls' Academy, Sherbrooke).	512	"
49.	Agnes L. Carr (Girls' High School, St. John, N.B.),	509	"
112.	Thomas B. McDonald (Gould Model School),	501	"
19.	Harry R. Trenholme (High School, Montreal),	496	"
40.	Edith Dobell (Trafalgar Institute, Montreal), } equal	488	"
134.	Mary F. Moore (Huntingdon Academy), }		
57.	Margaret A. Stewart (Girls' High School, St. John, N.B.),	482	"
150.	David McHarg (Inverness Academy),	475	"
67.	Thos. J. Symmes (Aylmer Academy),	467	"
155.	Elizabeth O. Wood (Inverness Academy),	466	"
183.	Ralph W. Hodgins (Shawville Academy),	465	"
54.	Jeanie B. Johnstone (Girls' High School, St. John, N.B.),	447	"
41.	Thomas A. McMartin (Private Tuition),	442	"
129.	Mary V. McGregor (Huntingdon Academy),	433	"
136.	Susie E. Nolan (Huntingdon Academy),	430	"
98.	Frederick A. Planche (Cookshire Model School), } equal	428	"
140.	Minnie C. Lord (Inverness Academy), }		
115.	Walter M. Fisk (Granby Academy),	422	"
15.	Edward A. Prentice (High School, Montreal),	415	"
132.	Peter McNaughton (Huntingdon Academy),	411	"
153.	Jessie Sutherland (Inverness Academy),	404	"
103.	Malinda V. F. Creswell (Lachute Academy),	403	"
82.	Alice M. Nunns (Coaticook Academy), } equal	398	"
213.	Annie L. Smith (Sutton Model School), }		
212.	Kathleen F. O'Regan (Sutton Model School),	390	"
105.	Jessie Crack (Danville Model School),	379	"
65.	Robert W. Neill (Aylmer Academy),	377	"

JUNIOR CERTIFICATES.

I. Candidates under 18 years of age.

24.	Ethel G. Claxton (Girls' High School, Montreal),	605 Marks.
29.	Winnifred I. Hearle (Girls' High School, Montreal),	478 "
5.	Thomas M. Brown (High School, Montreal),	425 "
210.	Sophronia M. Harvey (Sutton Model School),	376 "
128.	Ma ion E. Lewis (Huntingdon Academy),	375 "
36.	Bessie McH. Reid (Girls' High School, Montreal),	370 "
31.	Alice M. Jordan (Girls' High School, Montreal),	369 "
123.	John C. Bruce (Huntingdon Academy),	356 "
83.	Jennie E Nunns (Coaticook Academy),	322 "
143.	Lorne McK. Arkley (Inverness Academy),	300 "
39.	Amy F. Young (Girls' High School, Montreal),	298 "
130.	James D. McNair (Huntingdon Academy),	295 "
167.	Phœbe A. M. McOuat (Lachute Academy),	278 "
215.	Clair Baxter (Three Rivers Academy),	275 "
211.	Gertrude O'Regan (Sutton Model School),	254 "
214.	Mabel M. Wallace (Sutton Model School),	244 "
208.	Clelland W. Currie (Sutton Model School),	235 "
119.	Chauncey K. Lough (Hull Model School),	228 "
75.	Edith C. Vaughan (Clarenceville Academy), } equal	205 "
97.	Persis L. Plaisance (Cookshire Model School, }	

II. Candidates over 18 years of age.

30.	Annie Jackson (Girls' High School, Montreal),	372 "
122.	Elizabeth S. Brown (Huntingdon Academy),	366 "
100.	Jane Broughton (Cowansville Academy),	338 "
139.	Isabella J. Stowell (Huntingdon Academy),	309 "
163.	Mary E. Arm-trong (Lachute Academy),	278 "
191.	William S. Ball (Stanstead Wesleyan College),	245 "
47.	Mary E. Brown (Girls' High School, St. John, N.B.),	232 "

McGILL UNIVERSITY, MONTREAL.

JUNE, 1891.

The following Candidates have passed the Examinations required for Entrance.

I. In Arts.

Anderson, Jennie A.,	Stanbridge E., Q	Blow, Thomas H.,	Kemptville, O
Anderson, Percy C.,	Abercorn, Q	Brown, Ina S.,	St John, N.B
Archibald, Samuel G.,	Montreal, Q	Cairns, Abigail J.,	Cookshire, Q
Armstrong, Edgar N.,	Montreal, Q	Cameron, Alex. W.,	Huntingdon, Q
Armstrong, Katie,	Shawville, Q	Cameron, Susan E.,	St John, N.B
Bates, Chas. W.,	Almonte, O	Campbell, Florence C.,	St Johns, Q
Beard, Christina M.,	Gould, Q	Campbell, George A.,	Montreal, Q
Beckett, Annie,	Portage du Fort, Q	Carnochan, Lillian M.,	Montreal, Q

Chalmers, Louisa H., Granby, Q
Clark, Jos. A. M., Ridgetown, O
Clarke, Bertha E., St John, N.B
Cushing, Florence E., Montreal, Q
Davidson, Mary W., St John, N.B
Davidson, Shirley, Montreal, Q
Delahey, Fred. C., Pembroke, O
Dyer, Edward O., Sutton, Q
Dyke, Carroll D., Coaticook, Q
Edmison, John H., Owen Sound, O
Elliott, Andrew S., Woodstock, O
Fourney, Frank W., Montreal, Q
Frost, Isabella F., Waterloo, Q
Galbraith, Arch., Toronto, O
Gibson, Alice, St John, N.B
Gibsone, George F., Quebec, Q
Griggs, Alice J., Coaticook, Q
Gun, Arthur, Durham, O
Gustin, W. Alfred, Fitch Bay, Q
Harvey, Sophronia M., Abercorn, Q
Hayes, Jessie M., St John, N.B
Hickson, J. C., Montreal, Q
Jordan, Mary I., St John, N B
Mansfield, Edward D., Cowansville, Q
Marsh, May, Knowlton, Q
McAmmond, Anna, North Augusta, O
McGannon, A. V., Brockville, O
McGowan, Beatrice M, Knowlton, Q
McGregor, Mary V., Huntingdon, Q
McNaughton, Fran. M., Huntingdon, Q
Milloy, Jas. G., Glencoe, O
Mitchell, Albert T. G., Montreal, Q
Moffatt, William, Ormstown, Q
Moore, Mary F., Huntingdon, Q
Moses, Edith, Knowlton, Q
O'Regan, Kathleen F., Sutton, Q
Pettes, Dean H., Knowlton, Q
Robson, Amanda, Huntingdon, Q
Routledge, J. W., Woodstock, O
Shaver, H. E., Stratford, O
Shirreffe, Jessie M., Sherbrooke, Q
Smith, Annie L., Abercorn, Q
Smyth, Oswald, Montreal, Q
Solandt, Donald, Inverness, Q
Sulley, Nellie G., Mystic, O
Symmes, Howard C., Aylmer, Q
Symmes, Thomas J., Aylmer, Q
Taylor, William B., Quebec, Q
Tooke, Fred. T., Montreal. Q
Travis, Katherine H., St John, N.B
Trenholme, Clara J., Coaticook, Q
Tweddell, Ethelwynn M., Stanstead, Q
Vipond, Laura, Hudson, Q
Walker, Donald, Ormstown, Q
Watson, Rosalind, Huntingdon, Q
Watt, Jas. C., Almonte, O
Whelan, Mary A., Portage du Fort, Q
White, Lizzie N., St John, N.B
Whiteaves, Anna M., Ottawa, O
Whitney, Rosa, Stanstead, Q
Whitton, David, Ottawa, O
Wilson, H. G., Almonte, O

II. In Applied Science.

Angus, Willie F., Montreal, Q
Arkley, Lorne M., Inverness, Q
Aveling, Arthur P., St. Catharines, O
Balloch, Guy R., Centreville, N. B.
Baxter, Clair, Three Rivers, Q
Becket, Fred. M., Montreal, Q
Brown, Thomas M., Montreal, Q
Bruce, John C., Huntingdon, Q
Campbell, Anson H., Montreal, Q
Carron, Fred. B., Brockville, O
Chubb, William, St. Johns, Q
Clements, Fred. S., Fredericton, N. B.
Collins, Jas. E., Clarenceville, Q
Currie, Clelland W., Abercorn, Q
Doak, Algernon E., Coaticook, Q
Donnelly, Thomas. Danville, Q
Duff, Morell McK., Montreal, Q
Dyer, L. Aubrey, Montreal, Q
Edwards, Fred. E., Irvine, Q
Fuller, George D., Granby, Q
Gillanders, Walter, Inverness, Q
Grady, Gardiner, Inverness, Q
Hibbard, Walter R., Dunham, Q
Hodgins, Ernest W., Shawville, Q
Hodgins, Ralph W., Shawville, Q
Hutchins, Morris Chs, Cowansville, Q
Johnson, Ed. P., Ottawa, O
Johnston, Grant S., Inverness, Q
Lauder, S., E., Durham, O
McCaw, Wilkie B., Sherbrooke, Q
McDonald, Thomas B., Gould, Q
McHarg, David, Inverness, Q
McMartin, Thos. A., Grande Frenière, Q
McNair, Jas. D., Huntingdon, Q
McNaughton, Peter, Huntingdon, Q
McRae, James F., Cookshire, Q
Merrick, J. H., Merrickville, O
Miller, Melville, Montreal, Q
Neill, Robert W., Aylmer, Q
Pangman, Cecil C., Montreal, Q
Prentice, Edward A., Montreal, Q
Robertson, William H., Montreal, Q
Saunderson E. L. W., Montreal, Q
Scott, Alfred, Port Hope, O
Slack, Thomas J., Waterloo, Q
Steele, William M., Sherbrooke, Q
Sutherland, James, Inverness, Q
Thompson, Jas. A., Kinnear's Mills, Q
Trenholme, Harry R., Montreal, Q
Von Barnveld, Chs. E., Montreal, Q
Watson, S. E., Woodstock, O
White, Arthur J., Huntingdon, Q
Woodworth, Chs. W., Bedford, Q

PASSED THE PRELIMINARY SUBJECTS.

(In order of numbers.)

45 87 92 95 117 118 152 206 253 257 259 261 263 264
265 266 270 271 272 273 275 276 278 280 281 282 283 284
285 286 288 291 292 293 296 297 298 299 302 304 305 306
307 308 309 310 311 312 313 314 315 316 317 318 319 320
321 322 323 324 325 326 328 330 331 332 333 334 335 336
337 338 340 346 353.

Also 176 Academy pupils, examined at Quebec.

STANDING IN THE OPTIONAL SUBJECTS.

[The numbers correspond with those in the preceding lists. Candidates whose numbers are in parentheses are equal in standing. Those preceding a single asterisk have obtained at least two-thirds of the marks; those preceding a double asterisk, at least one-half; those following, at least one-third. Numbers 1-21, 250-296, 352-355 are from the Montreal High School; 22-33, 36-39, 297-333 from the Girls' High School, Montreal; 40 from the Trafalgar Institute, Montreal; 41 Private Tuition; 42-44, 342-351 from the High School, Quebec; 45-60 from the Girls' High School, St. John, N.B.; 61-67 from Aylmer Academy; 68-70 from Bedford Academy; 73-76 from Clarenceville Academy; ,77-86 from Coaticook Academy; 87-99 from Cookshire Model School; 100-102 from Cowansville Academy; 103-108 from Danville Model School; 109-110 from Dunham Model School; 111-112 from Gould Model School; 113-116 from Granby Academy; 117 from Hatley Model School; 118-121 from Hull Model School; 122-124, 126-142 from Huntingdon Academy; 143-155 from Inverness Academy; 156-162 from Knowlton Academy; 163-168 from Lachute Academy; 169-174 from Mansonville Model School; 175-179 from Portage du Fort Model School; 180-183 from Shawville Academy; 184-186 from Sherbrooke Boys' Academy; 187-189 from Sherbrooke Girls' Academy; 190 from Stanbridge East Model School; 191-199 from Stanstead Wesleyan College; 200-206 from St. Johns High School; 207-214 from Sutton Model School; 215-216 from Three Rivers Academy; 217-218, 220 from Waterloo Academy; 334-338, 340 from Misses Symmers and Smith's School, Montreal.]

Latin (Ordinary).—69, 188, 193, (194, 199), 141, (113, 133), 115, 151, 150, 166, (78, 81, 124, 131, 189, 197, 202), (102, 206), 190, *90, 181, 137, (148, 157, 164, 182), (84, 134, 158, 180), 168, (156, 161, 171), (66, 135, 207, 216), (67, 198, 209), 77, (175, 191, 205), (98, 123, 159, 177), (76, 144, 170, 186), (82, 83, 165, 178, 184, 210, 213),** (80, 140, 146), (75, 200, 212, 215), 201, (130, 179), (119, 129), (70, 101, 116), (172, 192), (117, 185), (68, 112).

Latin (Advanced).—1, 23, 58, 86, 50, 2, 49, 55, 28, 17, 24, 33*, (53, 79), 48, (42, 52, 56), 27, 51, (7, 218), 26, 54, 11 (18, 22, 34, 40)**, 10, 8, 57 (44, 111), 59, 25, 43, 20, 47, 46, 220, 112.

Greek (Ordinary).—194, 102, 193*, 79, 67, 66, 133, 209**, 207, (86, 124), (140, 212), 161, (159, 192, 213), 210, (69, 208, 211).

Greek (Advanced).—2, (7, 141), 1, 8*, 11, (18, 151), 17**, 44, 113, 42, 137, 131.

French.—(7, 79), 189, 188, (21, 24), 141, (5, 28, 58), 42, (2, 51, 166), (9, 60, 218), 23, (30, 201), (137, 190), (17, 101, 187), (46, 103, 197), (18, 33, 40, 155, 220), (1, 115)*, (22, 37, 44, 86, 158, 216), (157, 181), (25, 127), (34, 159), 50, (11, 69, 128), (19, 29, 113, 129, 147), (6, 178, 182, 193, 199), (126, 213), (32, 70, 144, 215), (78, 133, 136, 146, 209), (55, 90, 156, 162, 164, 210), (12, 39, 102, 124, 161), (59, 94), (16, 26, 131, 139, 206), 8, (186, 194, 203), (134, 177)**, (68, 180, 207), (14, 88, 97, 123, 179, 198), (122, 171), (41, 48, 151), 183, (13, 53, 76, 91, 149, 212), (104, 117, 167,) (135, 160), (10, 36, 145, 185), (52, 200), (3, 110, 217), (43, 140, 154, 175), (89, 148, 184), 214, (66, 111, 211), (85, 100), (15, 31, 116, 142, 208), (105, 138), (38, 65, 67, 98, 106, 112, 118, 130, 132, 143, 153, 170, 202).

French Reading at Montreal.—33, (21, 23), 22, (13, 32, 34, 40, 41), (2, 5, 12, 25)*, (11, 19, 27, 28, 29, 37, 39), (1, 18, 24, 36), (6, 9, 14, 26, 30)**, (3, 31, 38), (8, 17), (7, 10, 16, 20), 15.

German.—32, 23, 34, 28, (22, 33) (29, 37), (24, 25), 21*, 36, (9, 26), 38, 31**, 30, 14.

Geometry.—58, 209, 102, 12, 156, 86, (146, 151 ,(9, 10), 3, (1, 21), 79, (198, 218), 194, (51, 133), 159, 68, (141, 158), (42, 131), 56, 124, (2, 8, 11, 48, 144, 177, 197, 199, 201), (110, 113), (14, 105, 148), (145, 193), (6, 101), (46, 50, 112, 160, 171), (96, 190)*, 49, 70, 104, 181, (20, 150, 157), 183, 72, 69), (81, 210), (18, 52, 90), (44, 57, 99, 106), (5. 7, 17 78), (129, 154), (41, 88, 137), 45, 168, (27, 59, 132), (4, 60, 116, 165), (67, 92, 127, 128, 179), (94, 178, 187), (134, 140, 149), 153, (23, 147, 152, 200), (16, 180), 100**, (53, 54, 71, 220), 191, (25, 77), (55, 136, 189, 192), 93, (43, 126, 207), (138, 175, 185), (26, 130), (66, 75, 82, 84, 139, 142), 172, (123, 216), (19, 65), (15, 109, 155,213,) 22, (38, 162), (61, 103, 169, 211), (76, 95, 186, 214,) (111, 143, 164, 212, 215), 85, 208, (13, 63).

Algebra.—58, 69, 79, 146, (46, 55, 59, 147, 194), 209, 144, 104 141, (81, 137), 201, 188 (44, 190, 218), (11, 78, 153, 154), (2, 106, 123, 128, 148, 149, 151), (14, 90), (155, 207), 42, (67, 181,) 187, (86, 186), (1, 138, 150), (60, 180), (68, 92, 152, 193, 216), (88, 97), (70, 72), 105, (5, 84, 135, 156), (71, 189), (50, 142, 145, 182, 206), 9, (48, 57, 119, 143), (18, 127, 136, 212), 40, (41, 124, 171)*, (23, 53, 113), (20, 132), (49, 52, 54), 112, (21, 82, 133, 197), (129, 185), (45, 76, 134, 140, 210), 162, 4, (15, 47, 126), (51, 139), (12, 56, 61, 83, 160, (19, 62, 63, 107, 122, 164), (10, 66, 85, 130, 157, 211), (28, 116), 165, (65, 183, 199), 7, (95, 98, 99, 118, 158, 159, 167, 177,) (27, 96, 111)**, (94, 220), 33, (64, 170, 198), 34, 178, (102, 208), 214, (173, 215), (120, 131), (168, 205), (16, 161, 184), (174, 179, 217), (115, 175), (109, 110, 200), (6, 163), (13, 91, 213), (75, 77, 101), (8, 196), 80, (3, 17, 26).

Trigonometry.—151, 146, 141, 14, 1, 21, 9, 181, (10, 44), 12, 11, 106,* (2, 20), 17, (6, 183), 142, 137, 7, 18**, (16, 42, 132), 3, (8, 19), (15, 113), (43, 131).

Natural Philosophy.—79, 220, 86*, 65, 218, 193, (80, 194)**, 78, 196.

Drawing.—12, 29, 14, 26, 151, 31, 146,* 22, 38, 21, (24, 188), 186, (9, 33, 36), (23, 30), (3, 27), 116, 16, (6, 70)**, 187, (10, 28, 46), 58, (25, 39, 56), (37, 48), (50, 53, 68), 59, (19, 88), 86, 89, 91, 32.

English Language.—1, 28, 24, (23, 27, 33)*, 9, 7, 22, (16, 25), 11, 17, 40, 20, 29, 26,** (37, 39, 60), (31, 58), 3, 14, 2, (90, 91), 38, (8, 15), (21, 36, 59, 220), 18, 30, 50.

English Literature.—20, (21, 51), (1, 23), 21, 28, 14, 79, 15, (22, 38), 29, 40, (7, 25, 48), (33, 57), (27, 188) (9, 18, 86), (16, 91), 218, 46, (151, 189), (10, 220)*, (2, 190), (36, 84), (39, 50), (6, 11, 49, 141), (17, 82), (5, 42, 67, 78, 90, 104, 112), (37, 56) (19, 115, 124), (52, 69), (53, 60, 106, 142), (3, 26, 157, 164, 166), (98, 159), (44, 134, 181, 183), (96, 111, 185, 187)**, (12, 45, 85, 95, 207), (66, 80, 177), 55, 47, (31, 116, 122, 209), (100, 163, 165), (30, 65, 103, 156, 178), 8, (113, 131), (4, 54, 102, 140, 158, 161, 162, 213), (13, 70, 93, 94, 133, 175, 212), (81, 88, 136, 137), 99, (43, 68, 70, 83, 87, 92, 160), (61, 186), (101, 117, 132), (59, 75, 77, 89, 179, 184).

History.—22, 42, (112, 193), 26, 199*, (44, 102, 194), 198, 190, 101**, 65, 100, 207.

Geography.—151, 146, 193, (116, 147, 154), 58*, (46, 49, 148), 198, 5, 150, (120, 145, 155), (9, 115, 123), 1, 41, 144, 149, (10, 12, 19, 55), (3, 6), (2, 16, 102, 167), (11, 91, 141, 153), (143, 200), (7, 21), 152**, 126, (15, 18, 95, 117, 136, 142, 171), (13, 128, 131, 135, 180, 202), (8, 54, 70, 96, 132, 140, 201, 209), (14, 68, 93, 122, 124, 127, 190), (45, 133, 166, 183), 138, (52, 69, 127, 168, 220), (90, 216), (17, 42, 57, 92, 99, 113, 177), (98, 119, 169, 181, 192, 205), (165, 182, 185, 208, 212), (20, 94, 191, 213), (172, 175), (163, 170, 214), (73, 89, 134, 178, 186, 211), (76, 38, 129, 210).

Botany.—(90, 151), 116, 79, 155, 104, (94, 145), 91, (31, 98) 19, (23, 69, 113), 148, 24, (2, 9, 40), 220, (29, 106, 146, 187), (51, 88), 86, (37, 70), (3, 21, 33. 142), (49, 55, 77, 100, 147)*, (27, 46, 48, 189), (38, 83, 149), (25, 54, 84, 122), 171, (41, 82, 92), (36, 153), (58, 89, 190), (103, 218), (68, 81, 134), (39, 150, 175), (129, 178), 132, (50, 177), (139, 179)**, 16, 6, 126, (28, 52, 56), 165, (78, 144, 202), (127, 154), (57, 136, 157, 161, 200), (12, 99, 168), 167, (80, 184, 188), (59, 110, 162, 163), (160, 164, 170), (4, 30, 109), (105. 166, 173, 185, 186).

Chemistry.—146, (3, 199), 9, 110, 198, 109,* (21, 50, 193), 55, (16, 194)**, 58, 56, (6, 23), (12, 60, 197), 54, 48, (24, 53), (14, 19), 25, 28, 30. 45, 46, 47, 52, 171).

Physiology and Hygiene.—90, 197, (116, 199), 191, (41, 94), 104, (83, 91, 98, 115, 145, 180, 194), (79, 193), (86, 89), 80, (112, 151), (84, 160, 181, 188), (92, 150, 184, 196), 69, (113, 133, 146, 164), (183, 189, 220)*, (171, 192), (77, 95, 182, 186, 202), (70, 148), (99, 122, 154, 178, 185), (88, 96, 147, 155, 163), 82, 131, (68, 81, 111, 136, 200), (100, 167, 177, 217), (62, 124, 165, 166, 218), 85, (66, 144), (93, 106)**, 102, (128, 129, 143, 179, 187), (78, 159, 190), (127, 149, 153), (101, 134, 140), 139, (87, 158), (61, 64, 168, 201), (119, 126), 63, 110, 152, 157, 161, 162, 214), (65, 117, 121, 135, 142, 170, 173, 174, 175, 215, 216), 105, (67, 97, 156, 169, 213), (74, 76, 172, 205), 73, 109.

APPENDIX.

COLLEGE GROUNDS.

Under the regulations of the Governors, restricting the use of the exercise grounds to College clubs, and until permanent arrangements can be made in connection with a new gymnasium on the grounds, the following rules are in force :—

1. The membership of all clubs using the grounds must consist exclusively of members of the University.

2. No damage must be done to fences, trees, grass, etc.

3. All clubs desiring to use the ground in the time of the statutory college session, *i.e.*, from September 1st to May 1st, must register their officers, objects, rules and time desired, in the Principal's office, on or before September 20th in each year, when rights and privileges will be assigned to them.

4. Clubs desiring to use any portion of the grounds in the summer vacation, that is, from May 1st to September 15th, shall register as above on or before April 1st.

5. No clubs not so registered can be recognized, nor any right of students not organized in regular clubs.

6. No club has any right to invite strangers, except by special permission of the Board of Governors.

7. The University Athletic Association may use the grounds for the training of its members from September 1st to date of the College sports, at such times as may be necessary. Tickets shall be furnished to students so in training.

8. All the above privileges are subject to be revoked at any time by resolution of the Governors.

ADDITIONAL APPOINTMENTS.

JOHN T. NICHOLSON, B.Sc. (Edin.), Thomas Workman Professor in Mechanical Engineering—Faculty of Applied Science.

W. A. CARLYLE, B.A.Sc., Lecturer in Mining and Metallurgy—Faculty of Applied Science.

W. H. WALKER, B.A.Sc., Assistant to Professor of Chemistry.

EXAMINATION PAPERS

OF THE

McGILL UNIVERSITY,

MONTREAL.

SESSION OF 1890-91.

Montreal:
PRINTED BY JOHN LOVELL & SON,
ST. NICHOLAS STREET.
1891.

ORDER OF EXAMINATION PAPERS.

FACULTY OF ARTS.

PAGE

MATRICULATION SCHOLARSHIPS AND EXHIBITIONS, 1890 3

FACULTY OF APPLIED SCIENCE.

ENTRANCE EXAMINATIONS, ETC., 1890 5

FACULTY OF ARTS.

SESSIONAL EXAMINATIONS, 1891.

CLASSICS :—*Ordinary* 59

" *Honour* 82

MATHEMATICS AND NATURAL PHILOSOPHY :—*Ordinary* 88

" " " " *Honour* 99

ENGLISH LANGUAGE AND LITERATURE :—*Ordinary* 112

" " " " *Honour* 120

LOGIC, MENTAL AND MORAL PHILOSOPHY :—*Ordinary* 131

" " " " " *Honour* 133

FRENCH :—*Ordinary* 142

GERMAN :—*Ordinary* 151

HEBREW 162

NATURAL SCIENCES (Chemistry--Botany—Zoology--Geology—Mineralogy and Lithology) :—

Ordinary 166

Honour 170

FACULTY OF APPLIED SCIENCE.

MATHEMATICS, ETC. 179

ENGINEERING 189

MACHINERY, ETC 203

DESCRIPTIVE GEOMETRY 206

SURVEYING 208

PRACTICAL CHEMISTRY, MINING, ETC 212

MODERN LANGUAGES, NATURAL AND PHYSICAL SCIENCE.—*See Arts Examinations.*

FACULTY OF LAW. 221

FACULTY OF MEDICINE. 236

UNIVERSITY SCHOOL EXAMINATIONS.

PRELIMINARY SUBJECTS 239

OPTIONAL SUBJECTS 246

McGILL UNIVERSITY,

MONTREAL.

Faculty of Arts.

ENTRANCE, EXHIBITION, SCHOLARSHIP AND SUPPLEMENTAL EXAMINATIONS,

SEPTEMBER, 1890.

FACULTY OF ARTS.

MATRICULATION, SCHOLARSHIPS AND EXHIBITIONS, 1890.

FIRST YEAR ENTRANCE, 1890.

(For Passing only.)

GREEK.

MONDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner,..... A. J. EATON, M.A., Ph.D.

NOTE.—Candidates for entrance into the First Year will take (**A**) or (**B**), and (**D**) 1-6. Candidates for Senior Matriculation will take (**A**) or (**B**), (**C**) and (**D**).

(A) Translate:—

Κλέαρχος δὲ τότε μὲν μικρὸν ἐξέφυγε τὸ μὴ καταπετρωθῆναι, ὕστερον δ' ἐπεὶ ἔγνω ὅτι οὐ δυνήσεται βιάσασθαι, συνήγαγεν ἐκκλησίαν τῶν αὐτοῦ στρατιωτῶν· καὶ πρῶτον μὲν ἐδάκρυε πολὺν χρόνον ἑστώς· οἱ δὲ ὁρῶντες ἐθαυμαζον καὶ ἐσιώπων· εἶτα δὲ ἔλεξε τοιάδε· Ἄνδρες στρατιῶται, μὴ θαυμάζετε ὅτι χαλεπῶς φέρω τοῖς παροῦσι πράγμασιν. ἐμοὶ γὰρ Κῦρος ξένος ἐγένετο, καί με φεύγοντα ἐκ τῆς πατρίδος τά τε ἄλλα ἐτίμησε καὶ μυρίους ἔδωκε δαρεικούς· οὓς ἐγὼ λαβὼν οὐκ εἰς τὸ ἴδιον κατεθέμην ἐμοί, ἀλλ' οὐδὲ καθηδυπάθησα, ἀλλ' εἰς ὑμᾶς ἐδαπάνων.—ANAB. I., III., 2-3.

Ὁ μέντοι Κῦρος εἶπεν, ὅτε καλέσας παρεκελεύετο τοῖς Ἕλλησι τὴν κραυγὴν τῶν βαρβάρων ἀνέχεσθαι, ἐψεύσθη τοῦτο· οὐ γὰρ κραυγῇ, ἀλλὰ σιγῇ ὡς ἀνυστὸν καὶ ἡσυχῇ ἐν ἴσῳ καὶ βραδέως προσῇεσαν. Καὶ ἐν τούτῳ Κῦρος παρελαύνων αὐτὸς σὺν Πίγρητι τῷ ἑρμηνεῖ καὶ ἄλλοις τρισὶν ἢ τέτταρσι τῷ Κλεάρχῳ ἐβόα ἄγειν τὸ στράτευμα κατὰ μέσον τὸ τῶν πολεμίων, ὅτι ἐκεῖ βασιλεὺς εἴη· κἂν τοῦτ', ἔφη, νικῶμεν, πάνθ' ἡμῖν πεποίηται.—ANAB. I., VIII., 11-12.

(*a*) What is the force of each of the particles δὲ τότε μὲν in the first extract? (*b*) ἐκκλησία: derive and give one English derivative. (*c*) Give the tense (and explain its use) of the following verb-forms: ἔγνω, ἐδάκρυε, ἑστώς, ἐδαπάνων. Give the principal parts of φεύγω, ἔλεξε,

ἔψευσθη. (*d*) Why cannot θαυμάζετε (A. 1.) be indicative here? (*e*) Distinguish in meaning: οἱ, οἳ, οἷ. (*f*) Give the rules of syntax which explain the case of πράγμασιν and κρανῷ.

(B) Translate:—

Ὁ δὲ Κλέαρχος ἡγεῖτο μὲν εἰς ὅ,τι, ἐπορεύετο δὲ ἄλλοτε καὶ ἄλλοτε ἐφιστάμενος· ὅσον δὲ χρόνον τὸ ἡγούμενον τοῦ στρατεύματος ἐπιστήσειε, τοσοῦτον ἦν ἀνάγκη χρόνον δι' ὅλου τοῦ στρατεύματος γίγνεσθαι τὴν ἐπίστασιν· ὥστε τὸ στράτευμα καὶ αὐτοῖς τοῖς Ἕλλησι δόξαι πάμπολυ εἶναι, καὶ τὸν Πέρσην ἐκπεπλῆχθαι θεωροῦντα. Ἐντεῦθεν δὲ ἐπορεύθησαν διὰ τῆς Μηδίας σταθμοὺς ἐρήμους ἑξ, παρασάγγας τριάκοντα, εἰς τὰς Παρυσάτιδος κώμας τῆς Κύρου καὶ βασιλέως μητρός. ταύτας Τισσαφέρνης Κίρῳ ἐπεγγελῶν διαρπάσαι τοῖς Ἕλλησιν ἐπέτρεψε πλὴν ἀνδραπόδων. ἦν δὲ σῖτος πολὺς καὶ πρόβατα καὶ ἄλλα χρήματα.—Anab. II., IV., 26-27.

(*a*) Give the the verb-stem, mood, tense, and principal parts of ἡγεῖτο, ἐπορεύετο, δόξαι. (*b*) Explain the case of στρατεύματος, χρόνον, σταθμούς: the mood of ἐπιστήσειε, ἐκπεπλῆχθαι. (*c*) Give the derivation and meaning of πάμπολυ, ἀνδραπόδων, ἐπεγγελῶν.

(C) Translate: –

Αἱ δ' ὅτε νηὸν ἵκανον Ἀθήνης ἐν πόλει ἀκρῃ,
Θῆσι θύρας ὤϊξε Θεανὼ καλλιπάρῃος
Κισσηΐς, ἄλοχος Ἀντήνορος ἱπποδάμοιο·
Τὴν γὰρ Τρῶες ἔθηκαν Ἀθηναίης ἱέρειαν.
Αἱ δ' ὀλολυγῇ πᾶσαι Ἀθήνῃ χεῖρας ἀνέσχον.
Ἡ δ' ἄρα πέπλον ἑλοῦσα Θεανὼ καλλιπάρῃος
Θῆκεν Ἀθηναίης ἐπὶ γούνασιν ἠϋκόμοιο,
Εὐχομένη δ' ἠρᾶτο Διὸς κούρῃ μεγάλοιο.
"Πότνι' Ἀθηναίη, ἐρυσίπτολι, δῖα θεάων,
Ἄξον δὴ ἔγχος Διομήδεος, ἠδὲ καὶ αὐτὸν
Πρηνέα δὸς πεσέειν Σκαιῶν προπάροιθε πυλάων,
Ὄφρα τοι αὐτίκα νῦν δυοκαίδεκα βοῦς ἐνὶ νηῷ
Ἡνις ἠκέστας ἱερεύσομεν, αἴ κ' ἐλεήσῃς
Ἄστυ τε καὶ Τρώων ἀλόχους καὶ νήπια τέκνα."

Iliad VI., 297-310.

(*a*) What are Attic form for τῇσι, θῆκεν, ἠυκόμοιο, πεσέειν, πυλάων? (*b*) Why is νηὸν in the accusative? (*c*) Decline Θεανώ; and give the principal parts of ὤϊξε. (*d*) Remark on the uses of the Homeric article. (*e*) Derive καλλιπάρῃος, ἐρυσίπτολι, pointing out any peculiarities of stem. (*f*) Scan line 298.

(D) GREEK GRAMMAR.

1. Decline the nouns *χώρᾱ, μάχη, πολίτης, ἔργον, θήρ, πόλις, βασιλεύς*; the adjective *ἡδύς*, and participle *λῡ́σις*.

2. Decline the definite article and the simple relative pronoun.

3. Compare *μελάς, σοφός, ταχύς, πολύς, κῑλός*. Form adverbs from each of these adjectives.

4. What is the *verb-stem* of *λύω*? What are the *tense-stems* of this verb?

5. Inflect *εἰμί* and *εἶμι* in the present indicative; *λύω* in the future indicative mid.; *ἀγγέλλω* in the first aorist active; and *τῑμάω* in the imperfect indicative active.

6. What cases may *ἐπί* govern? illustrate by examples.

7. Translate, and state what principles of syntax are illustrated: (*a*) *σοφοὶ ἐγὼ καὶ σὺ ἦμεν.* (*b*) *ἡ πόλις μεγάλη ἐγένετο.* (*c*) *Ἀλέξανδρος ὁ τοῦ φιλίππου.* (*d*) *τὸ θαυμάζειν* (wonder) *ἀρχὴ ἐστι τῆς σοφίας* (why does *ἀρχή* not take the article?). (*e*) *αὕτη ὑμῖν ἔσται σωτηρία* (salvation). (*f*) *τοὺς νεανίας διδασκει τὴν μουσικήν.*

8. State the main uses of the Dative case in Greek. When may it be used to mark *personal agency?*

9. Express in Greek: (*a*) *If he shall do this, it will be well.* (*b*) *If he should do this, it would be well.*

10. Distinguish the uses of the negatives *οὐ* and *μή*.

LATIN.

MONDAY, SEPT. 15TH:—AFTERNOON, 2 to 5.

Examiner, ... A. J. EATON, M.A., PH.D.

NOTE.—Candidates for entrance into the First Year will take I. or II. IV., V. and VI. 1—6. Candidates for entrance into the Second Year will take III., IV., V. and VI.

I. Caesar hac oratione Lisci Dumnorigem, Divitiaci fratrem, designari sentiebat, sed, quod *pluribus* praesentibus eas res iactari nolebat, celeriter concilium dimittit, Liscum retinet. Quaerit ex solo ea, quae in conventu *dixerat*. Dicit liberius atque audacius. Eadem secreto ab aliis quaerit;

repperit esse vera : Ipsum esse Dumnorigem, summa *audacia*, magna apud plebem propter liberalitatem gratia, cupidum *rerum* novarum. *Compluris* annos portoria reliquaque omnia Aeduorum vectigalia parvo pretio redempta habere, propterea quod illo licente contra liceri audeat nemo. His rebus et suam rem familiarem *auxisse* et facultates ad largiendum magnas comparasse; magnum numerum equitatus suo sumptu semper alere et circum se habere, neque solum domi, sed etiam apud finitimas civitates largiter posse.—Caesar, B.G., I. 18.

II. Britanniae pars interior *ab iis* incolitur, quos natos in insula ipsi memoria proditum dicunt; maritima pars ab iis qui praedae ac belli inferendi causa ex Belgio transierant, qui omnes fere iis nominibus civitatum appellantur *quibus* orti ex civitatibus eo pervenerunt, et *bello* illato ibi permanserunt atque agros *colere* coeperunt. Hominum est infinita multitudo creberrimaque aedificia, fere *Gallicis* consimilia; pecorum magnus numerus. Utuntur aut *aere*, aut taleis ferreis ad certum pondus examinatis pro nummo. Nascitur ibi plumbum album in mediterraneis regionibus in maritimis ferrum, sed eius exigua est copia; aere utuntur importato.—Caesar, B.G., V. 12.

III. Recognosce tandem mecum noctem illam superiorem; iam intelleges multo me vigilare acrius ad salutem quam *te* ad perniciem rei publicae. Dico te priore *nocte* venisse inter falcarios—non agam obscure—in M. Laecae domum; convenisse eodem compluris eiusdem amentiae scelerisque socios. Num negas? quid taces? convincam, si negas. Video enim esse hic in senatu quosdam, qui tecum una fuerunt.—Cicero In Catil., I. 4.

Quod si omnis impetus domesticorum hostium, depulsus a vobis, se in me unum convertit, *vobis* erit videndum, Quirites, qua *condicione* posthac eos esse *velitis*, qui se pro salute vestra obtulerint invidiae periculisque omnibus: mihi quidem ipsi, quid est quod iam ad vitae fructum *possit* adquiri, cum praesertim neque in honore vestro, neque in gloria virtutis, quicquam videam altius, quo mihi libeat ascendere?—Cicero In Catil., III. 12.

IV. Ad quem tum Junc supplex his *vocibus* usa est:

" Aeole, namque tibi divum pater atque hominum rex
Et mulcere dedit fluctus et tollere vento,
Gens inimica mihi Tyrrhenum navigat aequor,
Ilium in Italiam portans victosque penates:
Incute vim *ventis*, submersasque obrue puppes;
Aut age diversos et disice corpora ponto.
Sunt mihi bis septem praestanti *corpore* nymphae;
Quarum, quae *forma* pulcherrima, Deïopeam
Connubio iungam stabili propriamque dicabo,
Omnes ut tecum meritis pro talibus annos
Exigat, et pulchra faciat te prole parentem."
Aeolus haec contra: " Tuus, o regina, quid *optes*,
Explorare labor; mihi iussa capessere fas est."—Virgil, I. 64-77.

V. (*a*) Carefully explain the construction of Italicized words in the extracts translated. (*b*) Give the divisions of Gaul according to Cæsar. (*c*) Scan lines 64 and 65 of the last piece. (*d*) Give the date of Catiline's conspiracy and the consuls of that year.

VI. Latin Grammar and Prose Composition.

1. Decline *dies, mare ;* the adjective *felix ;* the pronoun *idem.*

2. Decline together *vetus istud vinum.* Give the vocative sing. of *meus, deus ;* the ablative sing. of *vallis, cubile ;* the genitive plural of *princeps, nubes.*

3. Compare the adjectives *multus, dexter ;* the adverbs *bene, audacter.*

4. Inflect the imperf. subj. of *prosum ;* fut. indic. act. of *facio ;* plup. indic. pass. of *utor ;* and perf. subj. of *eo.*

5. Name the prepositions governing the ablative. Give the general rules for the position of the words in a Latin sentence.

6. Write down the principal parts of *scindo, fido, caedo, cado, venio.* What cases follow *misereor, obliviscor, iubeo, egeo, pareo?* To what class do the following verbs belong : *agito, fido, audeo, hortor, fio* ?

7. Give the main uses of the Ablative case in Latin.

8. Translate into English and explain each ablative case :—

Eisdem temporibus Persarum rex Darius ex Asia in Europam exercitu traiecto Scythis bellum inferre decrevit. Pontem fecit in Histro flumine quo copias traduceret. Eius pontis dum ipse abesset, custodes reliquit principes, quos secum ex Ionia et Acolide duxerat ; quibus singulis suarum urbium perpetua dederat imperia.

9. Translate into Latin :—

After the death of Orgetorix, the Helvetii determined to emigrate. Accordingly, in order to take away all hope of returning home, they deemed it the best thing to do to burn their villages and isolated dwellings. The corn, moreover, which they did not intend to carry with them they ordered to be burned. Now they thought they were ready to face all dangers, and so prevailed on their neighbors to attempt the same enterprise and set out with them.

MATHEMATICS.

TUESDAY, SEPTEMBER 16TH :—MORNING, 9 TO 12.

ARITHMETIC.

1. How much per day is £56 15s. 10½d. per year? (Express the result in shillings and pence.)

2. Find the square root of 626.25, of .09, and of .009.

3. In what time will the simple interest on $2000 at 3 per cent. per annum be the same as the compound interest on $1000 at 6 per cent. per annum for 3 years?

4. Find the expense of carpeting a room 15 feet, 9 inches long, by 12 feet, 5 inches broad, the carpet being $\frac{3}{4}$ yard wide, and $1.25 per yard.

ALGEBRA.

5. Resolve the following into elementary factors :—

$$12x^2 - x - 1,\ 3x^2 - 2x - 5,\ 12a^4 + a^2x^2 - x^4,\ 6a^4x^2 + a^2x - a^2$$

6. Reduce $\dfrac{x^3 + 3x^2 - 4}{x^3 - 1}$ to its lowest terms.

7. Simplify

$$\frac{2\,(x^2 - \frac{1}{4})}{2x + 1} + \frac{1}{2},\ \text{and}\ \frac{a^3 + 3a^2x + 3ax^2 + x^3}{x^3 - y^3} \div \frac{(a + x)^2}{x^2 + xy + y^2}$$

8. Solve the equations

(1) $$\frac{2x + 3}{4} + \frac{4x}{5} = \frac{1}{x} + \frac{6x + 2}{3} - \frac{x + 1}{6},$$

(2) $$\frac{x}{a - x} = \frac{a - x}{x} - \frac{2a - b}{2x},$$

(3) $$\left\{\begin{array}{l} x - \frac{1}{7}(y - 2) = 5 \\ 4y - \frac{1}{3}(x + 10) = 3 \end{array}\right\}$$

GEOMETRY.

9. If two angles of a triangle are equal, the triangle is isosceles.

10. Parallelograms between the same parallels are equal when they stand on equal bases.

11. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced, together with the square on half the line bisected, shall be equal to the square on the line made up of the half and the part produced.

12. Angles in the same segment of a circle are equal, and the opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

N.B.—Candidates must pass in each of the three subjects.

ENGLISH GRAMMAR.

WEDNESDAY, SEPT. 17TH :—MORNING. 9 TO 10 30.

Examiners,..... ..... { CHAS. E. MOYSE, B.A.
P. T. LAFLEUR, M.A.

(N.B.—Question 7 must be attempted by all.)

1. Give the plurals of the following nouns, and state the rule which each form illustrates: birch, valley, miasma, Mr. Smith, Son-in-law, knight-templar.

2. (*a*) What cases are found in English? Show that position or form determines the case of a noun. Show that pronouns are richer in case forms than nouns, and give a reason for their being so.

(*b*) Write four adjectives that do not admit of comparison. Give the positive of next, last, worse, rather.

3. Write the passive forms of the following tenses (one person only): I shall smite, (If) I smite, I am smiting, smite, I shall be smiting, to have smitten. Parse them.

4. Modify *I shall smite* with (*a*) an adverbial phrase and (*b*) an adverbial clause. Give examples of the ways in which adverbs are formed.

5. Define and illustrate by examples the various meanings of the prepositions *with* and *by*.

6. Correct or justify the following sentences, giving your reason in each case:—

(*a*) Between you and I, he does not speak the truth.

(*b*) I saw a young and old man sitting together.

(*c*) Neither haste nor delay are to be commended.

(*d*) The Parliament was unanimous. The Parliament were anxiously awaiting the result of the negotiations.

7. Analyse and parse:—

> Man knows where he first ships himself, but he
> Never can tell where shall his landing be.

ENGLISH HISTORY AND ESSAY.

WEDNESDAY, SEPT. 17TH :—10.30 to 12.30 A.M.

Examiners,..... { CHAS. E. MOYSE, B.A.
P. T. LAFLEUR, M.A.

FIRST YEAR.

1. Explain the following : Witenagemot, Danegelt, the Rump Parliament, the Plantation of Ulster, the Rye House Plot, the Cabal, the Exclusion Bill, the Statute of Mortmain, the Solemn League and Covenant.

2. Give a brief account of :—

(*a*) The Wars of the Roses.
(*b*) The war with Scotland in the reign of Edward VI.
(*c*) The Dutch wars of the Seventeenth Century.

3. When and how were the following persons conspicuous in the history of England : Laud, Monmouth, Perkin Warbeck, Raleigh?

SECOND YEAR.

(*For Passing only.*)

(Candidates will answer any two questions of the First Year set, and also *either* of the two following.)

4. Grive a brief outline of the history of England during the first quarter of the eighteenth century.

5. What possessions did England acquire in France? When and how did she acquire them, and when were they lost?

ESSAY FOR FIRST AND SECOND YEARS.

(N.B.—The essay is to be written on a separate bundle of paper.)

Write an essay of not less than two pages on any *one* of the following subjects :—

A. Holiday Camp-Life and Its Experiences.
B. Means of Travelling in the Nineteenth Century.
C. Sir Walter Scott.

FRENCH.

THURSDAY, SEPTEMBER 18TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., LL.D.

1. Translate into English :—

Revenir! Refaire en sens contraire le chemin qu'on a suivi!—des années avant—pour s'éloigner du pays; remonter les pentes qu'on a descendues; fouler le sol même où se sont jadis affermis nos pieds

d'enfant;—puis, à un détour du chemin, apercevoir la chère maison, pareille et pourtant changée, comme un vieux visage ami; entrer, baiser les bouches qui parlaient de nous quand nous étions absent, s'asseoir à la table d'autrefois; dire ces mots et les entendre: Vous rappelez-vous?.... Je me souviens!.....n'est-ce pas l'émotion la plus délicate et la plus pénétrante, celle qui atteint l'âme aux régions mystérieuses, qui y éveille des échos les plus secrets? Je ne sais quelle joie de victoire s'y mêle, de victoire sur le Passé,—la conscience de reprendre au Temps des minutes déjà vécues et de les revivre. C'est, en vérité, la revanche de la mélancolie des départs.

2. Write in the plural: *mal, bal, héros, chou, sou, portail, émail.* Give the rules to form those plurals.

3. Translate into French: *Her* father, *her* sister, *her* brothers. State the difference between the French and the English in the use of the Possessive adjectives.

4. Give the complete list of the Demonstrative Pronouns. Say how they vary, and give two examples.

5. Write the Imperfect Indicative, Imperative and Imperfect of the Subjunctive of *être, aimer, craindre, vivre* and *naître.*

The following translation is for the exhibitioners only.

6. Translate into French:—

Emile Souvestre was born at Morlaix in Brittany, April 15, 1806 (write these dates in letters). His father was a civil engineer, and he intended following the same profession. After his father's death he changed his mind and began to study law, but being ambitious to shine as a writer he soon abandoned the law also.

FIRST YEAR HIGHER ENTRANCE AND EXHIBITIONS, 1890.

GREEK.

MONDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner.....A. J. EATON, M.A., Ph.D.

1. Translate Xen. Anab. I., III., 2-3; I. VIII., 11-12.

2. (*a*) What is the force of each of the particles δὲ τότε μέν in the first extract? (*b*) Supply the ellipsis in each of the following phrases: ὡς ἀνυστὸν and ἐν ἴσῳ. (*c*) Distinguish οἵ, οἳ, οἱ. (*d*) Explain the position of the article in the phrase μέσον τὸ τῶν πολεμίων. (*e*) What is the derivation of καθηδυπάθησα? Note the force of this aorist as distinguished from the imperfect of ἐδαπάνων. (*f*) κἂν τοῦτο νικῶμεν πεποίηται: explain this form of conditional sentence.

3. Translate:—

Ὡς ἔφατ', οὐδ' ἀπίθησε πατὴρ ἀνδρῶν τε θεῶν τε.
Αὐτίκ' Ἀθηναίην ἔπεα πτερόεντα προσηύδα.
"Ἀλφα μάλ' ἐς στρατὸν ἐλθὲ μετὰ Τρῶας καὶ Ἀχαιούς,
Πειρᾶν δ' ὡς κε Τρῶες ὑπερκύδαντας Ἀχαιοὺς
Ἄρξωσι πρότεροι ὑπὲρ ὅρκια δηλήσασθαι."—Homer, Il., IV. 68-72.

Τὸν δ' ἄρ' ὑπόδρα ἰδὼν προσέφη πολύμητις Ὀδυσσεύς
"Ἀτρεΐδη, ποῖον σε ἔπος φύγεν ἕρκος ὀδόντων.
Πῶς δὴ ῥηῖς πολέμοιο μεφιέμεν; ὀππότ' Ἀχαιοὶ
Τυτθὸν ἐὸν λιτομαῖσιν ἐγείρομεν ὀξὺν Ἄρηα,
Ὄψαι, ἣν ἐθέλησθα καὶ αἴ κέν τοι τὰ μεμήλῃ,
Τηλεμάχοιο φίλον πατέρα προμάχοισι μιγέντα
Τρώων ἱπποδάμων· σὺ δὲ ταῦτ' ἀνεμώλια βάζεις."
Τὸν δ' ἐπιμειδήσας προσέφη κρείων Ἀγαμέμνων,
Ὡς γὰρ χωομένοιο· πάγιν δ' ὃ γε λάζετο μῦθον.
"Διογενὲς Λαερτιάδη, πολυμήχαν' Ὀδυσσεῦ,
Οὔτε σε νεικείω περιώσιον οὔτε κελεύω·
Οἶδα γὰρ ὡς τοι θυμὸς ἐνὶ στήθεσσι φίλοισιν
Ἤπια δήνεα οἶδε· τὰ γὰρ ὀρνεις ἃ τ' ἐγώ περ.—Il. IV. 349-361.

4. (*a*) Account for the following cases: *σε, ἔπος, ἕρκος, πολέμοιο, χωομένοιο.* (*b*) *οὐδ' ἀπίθησε* (v. 68); what figure of speech? (*c*) Explain the uses of the Subjunctives in the second extract. What mood is *ἐγείρομεν*? (*d*) What Greek word is to be supplied with *μεθίεμεν*? (*e*) *μετὰ τρῶας* (v. 70); remark on this construction. What cases does *μετά* govern? Give its commonest uses.

5. Divide lines 71 and 72 into feet, marking the verse caesura.

6. Give an outline of the story of the Iliad, as contained in the first three books.

7. Translate:—

Δοκεῖτε δέ μοι πολὺ βέλτιον ἂν περὶ τοῦ πολέμου καὶ ὅλης τῆς παρασκευῆς βουλεύσασθαι, εἰ τὸν τόπον, ὦ ἄνδρες Ἀθηναῖοι, τῆς χώρας, πρὸς ἣν πολεμεῖτε, ἐνθυμηθείητε, καὶ λογίσαισθε ὅτι τοῖς πνεύμασι καὶ ταῖν ὡραις τοῦ ἔτους τὰ πολλὰ προλαμβάνων διαπράττεται Φίλιππος καὶ φυλάξας τοὺς ἐτησίας ἢ τὸν χειμῶνα ἐπιχειρεῖ, ἡνίκ' ἂν ἡμεῖς μὴ δυναίμεθα ἐκεῖσε ἀφικέσθαι. δεῖ τοίνυν ταῦτ' ἐνθυμουμένους μὴ βοηθείαις πολεμεῖν, ὑστεριοῦμεγὰρ ἁπάντων, ἀλλὰ παρασκευῇ συνεχεῖ καὶ δυνάμει. ὑπάρχει δ' ἡμῖν χειμαδίῳ μὲν χρῆσθαι τῇ δυνάμει Λήμνῳ καὶ Θάσῳ καὶ Σκιάθῳ καὶ ταῖς ἐν τούτῳ τῷ τόπῳ νήσοις, ἐν αἷς καὶ λιμένες καὶ σῖτος καὶ ἃ χρὴ στρατεύματι πάνθ'

ὑπάρχει· τὴν δ' ὥραν τοῦ ἔτους, ὅτε καὶ πρὸς τῇ γῇ γενέσθαι ῥᾴδιον καὶ τὸ τῶν πνευμάτων ἀσφαλὲς, πρὸς αὐτῇ τῇ χώρᾳ καὶ πρὸς τοῖς τῶς ἐμπορίων στόμασι ῥᾳδίως εἰσεσθε.—DEMOSTHENES, Phil. I., §§ 31-32.

Ταῦτ' ἀκούσαντες ἐκεῖνοι, καὶ θορυβοῦντες ὡς ὀρθῶς λέγεται, καὶ πολλοὺς ἑτέρους λόγους παρὰ τῶν πρέσβεων καὶ παρόντος ἐμοῦ καὶ πάλιν ὕστερον, ὡς ἔοικεν, οὐδὲν μᾶλλον ἀποσχήσονται τῆς Φιλίππου φιλίας οὐδ' ὧν ἐπαγγέλλεται. καὶ οὐ τοῦτ' ἔστιν ἄτοπον, εἰ Μεσσήνιοι καὶ Πελοποννησίων τινὲς παρ' ἃ τῷ λογισμῷ βέλτισθ' ὁρῶσί τι πράξουσιν, ἀλλ' εἰ ὑμεῖς οἱ καὶ συνιέντες αὐτοὶ καὶ τῶν λεγόντων ἀκούοντες ἡμῶν ὡς ἐπιβουλεύεσθε, ὡς περιστοιχίζεσθε, ἐκ τοῦ μηδὲν ἤδη ποιεῖν λήσεθ', ὡς ἐμοὶ δοκεῖ, πάνθ' ὑπομείναντες· οὕτως ἡ παραυτίχ' ἡδονὴ καὶ ῥᾳστώνη μεῖζον ἰσχύει τοῦ ποθ' ὕστερον συνοίσειν μέλλοντος.—DEMOSTHENES, Phil. II., §§ 26-27.

8. (*a*) What is the force of the particle *ἄν* (§ 31)? Explain the use of the optatives which follow. (*b*) *τόπον*: give an English derivative (*c*) Account for the cases *ἀπωντων* (§ 32), *παρασκευῇ*, *ὑμῖν*, *ὥραν*.

9. (*a*) Under what circumstances did Philip succeed to the Macedonian throne? (*b*) What was the cause of the war between Philip and the Athenians? What other war occupied the energies of the Athenians at this time? Give dates. (*c*) Describe the geographical position of Amphipolis, Pydna, Olynthus, Potidaea, and Methone. (*d*) What was the occasion of the second Philippic?

LATIN.

MONDAY, SEPT. 15TH :—AFTERNOON, 2 TO 5.

Examiner,..... A. J. EATON, M.A., PH.D.

1. Translate :—

Ac si quis est talis, *qualis* esse *omnis* oportebat, qui in hoc ipso, in quo exsultat et triumphat oratio mea, me vehementer *accuset*, quod tam capitatem hostem non *comprehenderim* potius quam emiserim, non est ista mea culpa sed temporum. Interfectum esse L. Catilinam et gravissimo supplicio adfectum iam pridem oportebat, idque a me et mos maiorum et huius imperi severitas et res publica postulabat. Sed quam multos fuisse putatis qui quae ego *deferrem* non *crederent*?

Cum ille, homo audacissimus, conscientia convictus, primo reticuisset, patefeci cetera : quid ea nocte *egisset*, quid in proximam constituisset, quem ad modum esset *ei* ratio totius belli descripta, edocui. Cum haesitaret cum teneretur, quaesivi quid dubitaret *proficisci* eo, quo iam pridem *pararet*, cum arma, cum securis, cum fascis, cum aquilam illam argenteam,

cui etiam sacrarium *domi suae* fecerat, scirem esse praemissam.—CICERO IN CATILINAM, II. 3 and 13.

2. (*a*) Explain grammatically the words in Italics. (*b*) Remark on the uses of the Imperfect tense in the first piece. (*c*) Comment on the meaning of the following words: *securis, fascis, aquilam argenteam, sacrarium.*

3. Translate Virgil, Æneid, I. 64-77.

4. (*a*) Divide into feet, marking the ictus of every foot and the verse caesura, the following lines:—

Unius ob noxam et furias Aiacis Oilei
Tune ille Aeneas, quem Dardanio Anchisæ,
Iactemur, doceas. Ignari hominumque locorumque
Erramus, vento huc et vastis fluctibus acti.

(*b*) Note any metrical peculiarities in these lines.

5. Comment on the following epithets or phrases: *Saturnia, Maia genitum, iudicium Paridis, nimbosus Orion, tela Typhoia, geminos Triones.*

6. Translate:—

(*a*) Ad haec Ariovistus respondit: ius esse belli ut qui vicissent iis quos vicissent quemadmodum vellent imperarent: item populum Romanum victis non ad alterius praescriptum sed ad suum arbitrium imperare consuesse. Si ipse populo Romano non praescriberet quemadmodum suo iure uteretur, non opertere sese a populo Romano in suo iure impediri. Aeduo sibi, quoniam belli fortunam tentassent et armis congressi ac superati essent, stipendiarios esse factos. Magnam Caesarem iniuriam facere qui suo adventu vectigalia sibi deteriora faceret.—CEASAR, B. G., I. 36.

(*b*) Multa ab Caesare in eam sententiam dicta sunt, quare negotio desistere non posset, et "Neque suam, neque Populi Romani consuetudinem pati, uti optime meritos socios desereret: neque se iudicare Galliam potius esse Ariovisti, quam populi Romani. Bello superatos esse Arvernos et Rutenos ab Q. Fabio Maximo, quibus Populus Romanus ignovisset, neque in provinciam redegisset, neque stipendium imposuisset. Quod si antiquissimum quodque tempus spectari oporteret, Populi Roman iustissimum esse in Gallia imperium: si iudicium Senatus observari oporteret, liberam debere esse Galliam, quam bello victam suis legibus uti voluisset."—CAESAR, B. G., I. 45.

7. (*a*) Write out in Direct Narration the passage from *Ius esse belli* through *in suo iure impediri.* (*b*) Derive the following compounds: *consuesse, stipendiarios, iniuriam, adventu, quotannis, negotio, provinciam.* Why are not *quemadmodum* and *respublica* true compounds? (*c*) Give the grammatical construction of the following words in the second extract: *negotio, pati, desereret, quibus, bello, legibus, oporteret.*

GRAMMAR AND COMPOSITION.

THURSDAY, SEPT. 18TH:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

1. Decline the following nouns (giving the stem of each, and carefully marking the accent in Greek, and the vowel-quantity in Latin): *ὁδός, σῶμα, ναῦς, Ζεύς, νύξ, annus, ager, domus, fides, Aeneas, Delos.*

2. (*a*) Give the nominative plural, with meaning, of *locus, littera, copia, sal.* (*b*) What words of the second declension form the gen. pl. in *um?* (*c*) When is *dies* of the feminine gender?

3. (*a*) Name the different classes of adjectives, and give examples. (*b*) Give the comparatives and superlatives of *κοῦφος, σοφός, ἡδύς, audax, acer, bonus.*

4. Explain the following forms:—*τοὔνομα, ἀνήρ, ἐγῳδα, ἀφαιρέω, βλώσκω, ἄλλος* (cf. the Latin form), *τρέφω, amasse, sum, gigno, debeo, nosse, nolo nuntius, quicquam.*

5. Classify verbs in ω with reference to the formation of the present stem from the simple stem, arranging each of the following examples under its respective class:—*ἅπτω, φεύγω, φθάνω, γηράσκω, δοκέω, λύω, φυλάσσω.*

6. (*a*) Inflect *capio* in the pres. indic., act. and pass. (*b*) Give the principal parts of *sono, seco, iuvo, torqueo, cado, caelo.* (*c*) Inflect *λείπω* in the perf. indic. mid. (*d*) From what verbs are following participles formed: *suetus, nixus, tortus, insitus, orsus, citus, fatus?*

7. (*a*) What is the usual construction with *indigeo, careo, invideo, utor pronus, clam, tenus?* (*b*) How is Purpose expressed in Greek and Latin? Can the Infinitive be so used? How are Prohibitions expressed in Greek and Latin? Give examples.

8. Distinguish in meaning between *ὁ ἀνὴρ σοφός, ἀνὴρ ὁ σοφός.* Express in Greek; *this man; the same man; we see* (*ὁράω*) with *our eyes* (*ὄφθαλμος*); *we do not begin* (*ἄρχω*) war; *it is much better; these things happened.*

9. Translate, and explain the grammatical construction of italicized words: (*a*) pars militum *capti* sunt. (*b*) regna, honores, divitiae *incerta* sunt. (*c*) primus *a Racilio sententiam* rogatus sum. (*d*) fons *cui* nomen Arethusa fuit. (*e*) sol multis *partibus* maior est quam *luna.* (*f*) is habitat *Mileti.* (*g*) ubinam *gentium* sumus? (*h*) non intelligor *ulli.* (*i*) inutile *ferrum* cingitur.

10. Translate into Greek: (1) The father rejoiced in his son's being wise. (2) I wonder at the men of the present day. (3) He took pleasure in doing kind offices to the good. (4) It is necessary to bear what comes from the gods. (5) He said that, unless the citizens performed him this service, he would lay waste the rest of the country.

11. Translate into Latin: (1) I never injured you, but you have always envied me, and you hate my friends. (2) Both you and I have waged many wars for our country. (3) Both you and your brother, he replied, were in good health. (4) The best institutions and laws you have set at naught, and this will be your ruin to-day. (5) Does it seem that death is an eternal sleep, or the beginning of another life?

*12. Translate into Latin:—

Cæsar was in the neighborhood of Rome, when he was informed that the Helvetii were about to cross the Rhone by the bridge which was near Geneva. Accordingly he set out from the city, and in eight days reached that town and cut down the bridge. He did not think that the enemy would cross by the fords; nevertheless, he levied as many soldiers as he could, and to the envoys who came to him to ask the privilege of going through the province, he answered: "Let me take time to think it over." This he said that time might intervene till he could get all things ready for preventing them.

---

* Extra question.

EUCLID.

TUESDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove that if the opposite sides of a quadrilateral are equal it is a parallelogram, giving the enunciation of the propositions on which the proof depends.

2. Show that the theorem, "the rectangle under the sum and difference of two lines is equal to the difference of their squares," includes two propositions of Book II.

3. Divide a straight line into two parts, such that the rectangle under the whole and one part shall be equal to the square of the other.

4. If two opposite angles of a quadrilateral be together equal to two right angles, prove that the circle described through three of its vertices must pass through the other also.

5. If a right line be drawn perpendicular to the radius of a circle at its extremity, prove that it cannot cut the circle.

6. On a given straight line construct a segment of a circle containing an angle equal to half the angle of an equilateral triangle.

*7. Find a mean proportional between two given lines.

*8. If four right lines be proportional, the rectangle under the extremes is equal to the rectangle under the means.

*9. In equal circles or in the same circle angles at the centre are in the same ratio as the arcs in which they stand.

**Extra questions.*

ALGEBRA—ARITHMETIC.

TUESDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Insert 4 geometric means between 160 and 5.

2. Find a formula for the sum of a series in Arithmetical Progression, and apply it to calculate the number of strokes a clock strikes in 12 hours.

3. Define Harmonical Progression, and find the harmonic mean between two numbers, a and b.

4. Solve the equations:—

(*a*) $ax^2 + bx + c = o$

(*b*) $\frac{x}{a} - \frac{y}{b} = 1 \; ; \; \frac{x}{b} + \frac{y}{a} = \frac{a}{b}$

(*c*) $\frac{6x - 3}{2x + 7} = \frac{3x - 2}{x + 5}$

(*d*) $\frac{3x - 1}{2x - 1} - \frac{4x - 2}{3x - 1} = \frac{1}{6}$

5. Find three consecutive numbers whose sum shall equal 84.

6. A person swimming in a stream which runs $1\frac{1}{2}$ miles per hour finds that it takes him four times as long to swim a mile up the stream as it does to swim the same distance down; at what rate does he swim?

7. Find the value of x and y in the equations $x^3 + y^3 = 407$; $x + y = 11$.

8. Resolve into factors $x^2 - x - 240$.

9. Find the length of the perpendicular let fall on one of the sides of an equilateral triangle from the opposite angle, the length of the side being $\frac{1}{4}$ foot.

10. A farm in the form of a rectangle contains 100 acres, and one side is a mile long, find in feet the length of the other side.

11. Find the interest on $7653 for 193 days at $4\frac{1}{2}$ per cent.

12. Add together $2\frac{1}{2} + 3\frac{1}{4} - 6\frac{5}{6}$ and divide the result when reduced to a decimal by .05.

ENGLISH GRAMMAR.

WEDNESDAY, SEPT. 17TH:—MORNING, 9 TO 12.

Examiners, ... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

FIRST YEAR.

1. Write sentences illustrating the different uses of *so* and *as*, and carefully parse these words in each case.

2. Write a list of the various kinds of adverbial phrases and clauses which modify a predicate. Illustrate each kind by one sentence and underline the adverbial portion.

3. Write sentences illustrating the use of (*a*) the present participle; (*b*) the gerund; (*c*) the simple infinitive.

4. Write sentences, illustrating the various kinds of complement of the Predicate, but do not use the verb *to be* as your verbs of incomplete predication. Name the complements you have written. *I shall write*: state whether you regard *write* as a complement or not, and give a reason for your answer.

5. Give examples of the regular comparison of adjectives and adverbs. Give four examples of the irregular comparison of adjectives and examine the forms.

6. Show, from their meaning, that the preposition *of* and the adverb *off* are connected: also *to* and *too*. Illustrate the meanings of the prepositions *with* and *by*. Comment on *by* in *by*-law.

7. Classify pronouns and give examples of each class. Add a few notes bearing on the history of interesting forms or case-inflexions.

8. Make notes on the following suffixes which mark gender-steren. Mention and illustrate the various ways of distinguishing gender in English.

9. Analyse: To Drambleby's, and there did talk a great deal about pipes; and did buy a recorder, which I do intend to learn to play on, the sound of it being, of all sounds in the world, most pleasing to me.

SHAKSPERE: *Coriolanus.*

WEDNESDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiners,..... ..... { C. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. Whence did Shakspere draw his dramatic material for the plot of this play? Has he in any case departed from the facts of the story?

2. Give your opinion of the part played by the plebeians, and of the general character of the populace, in *Coriolanus*.

3. Make short notes, etymological and historical, on the following words:—empericutick, lockram, *prank* them in authority, fond, sowle, holp.

4. Give an outline of the events contained in Act V.

5. Comment upon any grammatical peculiarities that you may have noticed in this play.

6. Scan any six consecutive verses, and write short notes upon irregularities of scansion in Shaksperian verse.

SECOND YEAR EXHIBITIONS, 1890.

GREEK.

MONDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner,..... ..... A. J. EATON, M.A., Ph.D.

1. Translate: Homer, Odyssey VII., vss. 159-166; 308-328.

2. (*a*) What are the Attic forms for *ἐών, ἐσσι, ἐχέμεν, ἰσχανόωνται*. Show how the Attic and Homeric forms are related. (*b*) Explain the following constructions: *κεχολῶσθαι* (v. 310), *πάχος* (v. 324), *μῆχος, ἐποψόμενον*. (*c*) How are future conditions expressed? Explain the mood of *δοίην* (v. 314). (*d*) *μή γένοιτο* (v. 316); how is the use of *μή* with the optative to be explained?

3. Scan lines 311 and 319. Define the terms *thesis*, *arsis*, *ictus*. What are *spondaic verses?* How frequently are they found in Homer? Do they occur in Virgil?

4. Translation: Herodotus, Bk. III., chaps. 21 and 33.

5. (*a*) In what dialect did Herodotus write? Name its leading characteristics. Select six words from ch. 21, whose forms differ from the Attic. (*b*) *ἥκοιεν*: why optative? (*c*) *εἰ γὰρ ἦν δίκαιος, οὐτ' ἂν ἐπεθύμησε*; explain this form of conditional sentence. (*d*) *μηδὲν ἠδίκηται*; why not *οὐδέν*? (*e*) What accusatives are *ταῦτα* and *τοῦσον*?

6. (*a*) Comment briefly upon the following proper names: *Ἰχθυοφάγοι, Αἰθιόπες, Ἀμμώνιοι.* (*b*) Why were the Ichthyophagi sent to Ethiopia? How is "the table of the sun" described? (*c*) Explain the formation of such compounds as *Ἰχθυοφάγοι.* (*d*) What disease is supposed to be referred to in chapter 33? Why called *ἱρή*?

7. Translate: Demosthenes, Olynthiacs, (*a*) I., §§ 10-11: *καὶ ἐμοιγε .... τὸ μεμνῆσθαι τὴν χάριν.* (*b*) II. § 22: *Εἰ δὲ τις.....ἢ ἐκείνῳ.*

8. Explain the mood and tense of *ἀπολωλεκέναι, θείη, θείην, πεποιθέναι, πεφηνέναι, βουλώμεθα, λάβῃ, λάθῃ.*

9. Give an analysis of the First Olynthiac.

SECOND YEAR ENTRANCE.

(For Passing only.)

(Candidates will answer questions 1, 3, 4, 5, 7 of the First Year paper, also the following. N.B.—Question 7 must be attempted by all.)

8. Examine in the light of older English the words *those; methinks; hindmost; vixen; now-a-days; the* more, *the* better.

9. Parse the words in italics: *I was asked that question.* He walked five *miles.* *What* went ye out *for to see?* This stuff cost me five *shillings* a *yard.* The rain was heavy *while* it lasted.

10. Notice leading differences between the Indicative mood (Active Voice) of an English verb and the same mood of (*a*) a Latin, (*b*) a Greek verb. Illustrate your statements.

11. Refer the English language to its place among languages.

LATIN.

MONDAY, SEPT. 15TH :—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., Ph.D.

1. Translate : Virgil, Georgics, Bk. I., vss. 84-93, 351-364.

2. (*a*) Explain the subjunctives *veniat* (v. 90), and *moneret* (v. 353). (*b*) Scan lines 352, 357, 85, marking the principal Caesura. Point out some peculiarities of metre, and a line where the poet aptly accommodates the sound to the sense. (*c*) What two constructions may *tempore* take? Explain grammatically *sibi temperat carinis.*

3. (*a*) To what class of poems do the Georgics belong? Name two other famous Latin poems of this class? What Latin writer especially influenced the thought and style of the Georgics? (*b*) Give an outline of Virgil's life.

4. Translate, Horace, Odes, Bk. I. Ode XXVIII.

5. (*a*) What is the object of this ode? Who was Archytas? (*b*) Explain the mythological allusions in vss. 7, 8, 9, 10, 20. (*c*) *Illyricis undis* (v. 22), *fluctibus Hesperiis* (v. 26) : what waters are meant?

6. Name and explain the metre of this ode. Scan the first two lines.

7. Translate :—

(*a*) *Ceterum, cum aut poena.....quoties velit, patiantur.* Livy, XXIII. 15.

(*b*) *Hoc colloquium.....signum accepissent.* Livy, XXIII. 44.

8. (*a*) Write out the passage in direct narration from *multos eum* to *sit oppressus.* Explain the change of tense from direct to indirect in this passage.

(*b*) Explain the following constructions in chap. 44 : *abstulit spem Hannibali ; Poenorum haud plus quadrigenti ; ut aggrederetur ; ut vidit ; ni diremisset ; pars erant ; tenuerunt munimentis ; praedatum ; eo spatio ; ni accepissent* (what word and tense of the direct form does this verb represent?)

9. Translate (at sight) :—

Ad Hannibalem, cum ad lacum Averni esset, quinque nobiles iuvenes ab Tarento venerunt, partim ad Trasimenum lacum, partim ad Cannas capti, dimissique domos cum eadem comitate, qua usus adversus omnes Romanorum socios Poenus fuerat. Ii, memores beneficiorum eius perpulisse magnam partem se iuventutis Tarentiae, referunt, ut Hannibalis amicitiam ac societatem, quam populi Romani, mallent ; legatosque ab

suis missos, rogare Hannibalem, ut exercitum propius Tarentum admoveat. Si signa eius si castra conspecta a Tarento sint, haud ullam intercessuram moram, quin urbs dedatur. In potestate iuniorum plebem, in manu plebis rem Tarentinam esse. Hannibal collaudatos eos, oneratosque ingentibus promissis, domum ad coepta maturanda redire iubet: se intempore affuturum esse. Hac cum spe dimissi Tarentini.

GENERAL PAPER.

THURSDAY, SEPT. 18TH:—AFTERNOON, 2 TO 5.

Examiner,..... A. J. EATON, M.A., PH.D.

(*Candidates will answer* 2, 4, 8, *and* 9 *of the paper on Grammar for First Year Exhibitions, and the following.*)

1. To which of the Greek tribes did the Spartans belong? Write a short account of their character and political institutions.

2. Write short notices of the following political personages: Solon Peisistratus, Alcibiades, Pericles, Cleon, Demosthenes.

3. Write upon any two of the following subjects: (*a*) Rome's Original Constitution. (*b*) Expulsion of the Tarquins, and Change of the Constitution. (*c*) The First Punic War. (*d*) The Reforms of the Gracchi.

4. (*a*) Give an example of *Metathesis*, of *Compensatory Lengthening* and of *Vowel Assimilation* in Latin or Greek. (*b*) What is an *enclitic*?

5. (*a*) When is a syllable said to be *long by position*? Before what combinations of consonants is the vowel always long? (*b*) Mark the quantity of each vowel, and show what metrical foot each word represents: *carmina*, *leges* (laws), *legis* (of a law), *parens*, *dominus*.

6. (*a*) What mood do Causal Clauses take? (*b*) Show how Contrary-to-fact conditions are expressed in Latin and Greek.

7. Translate into Greek (accenting):—(1) If the physician had been present, my child would not have died. (2) The army of the Persians comes on as silently as possible. (3) They will choose to obey rather than fight. (4) They condemned him to death, and that too though he was your citizen. (5) This man has inflicted more damage upon the city than any other single person.

8. Translate into Latin (marking all long vowels):—

In these great calamities, the brave and intrepid general, instead of manifesting fear, turned to his dejected soldiers and said (*orat. abl.*), "Courage! All will be well! We shall succeed past expectation, if we do

our best to teach the enemy that they can be resisted by brave men. Why do we delay here in idle conversation when we ought to be up and doing? I am informed that 20,000 infantry, 4,000 cavalry, and fifteen ships of war have been despatched against us; but do not fear them, for, while they are mercenaries, we are free men. The enemy will certainly not pity you, and there is no hope but in arms."

ORDINARY MATHEMATICS.

TUESDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,..... ....ALEXANDER JOHNSON, LL.D.

1. A straight line drawn parallel to the base of a triangle cuts the sides of the triangle into proportional segments, the homologous segments being on the same side of the line.

2. In a right-angled triangle the perpendicular let fall from the right angle on the hypotenuse divides the triangle into parts which are similar to the whole and to each other. (*a*) Either side is a mean proportional between the hypotenuse and the conterminous segment of it.

3. Similar triangles are to one another in the duplicate ratio of their homologous side.

4. Inscribe a circle in a triangle.

5. Show how to complete a circle of which an arc is given.

6. Calculate sin 60° to 3 places of decimals, proving your method.

7. In any triangle $\sin \frac{1}{2} A = \sqrt{\frac{(s-b)(s-c)}{bc}}$

8. Prove $\sin 2A = 2 \sin A \cos A$

$\cos 2A = \cos^2 A - \sin^2 A$

and thence $\tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$

9. Define a degree and find the circular measure of 120°.

10. Solve the equations:—

(*a*) $\frac{x}{2} + \frac{2}{x} = \frac{x}{3} + \frac{3}{x}$;

(*b*) $\sqrt{2x+9} - \sqrt{x-1} = \sqrt{x+1}$;

(*c*) $3x + 2y = 13$; $7x + 3y = 27$;

(*d*) $\frac{1}{2}(x-2) - \frac{1}{3}(x-3) + \frac{1}{4}(x-4) = 4$.

11. Given

$$a\,x + by + c = o$$
$$a'\,x + b'z + c' = o$$

prove $$\frac{x}{bc' - b'c} = \frac{y}{ca' - c'a} = \frac{1}{ab' - a'b}$$

12. Find two numbers, one of which is three-fifths of the other, so that the difference of their squares may be equal to 16.

13. Find the factors of $4\,z^2 - (2z - x)^2$

GEOMETRY.

TUESDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If tangents drawn from a variable point P to two given circles (A and B) have a given ratio, the locus of P is a circle co-axal with A and B.

2. If four points be collinear, their anharmonic ratio is equal to the anharmonic ratio of their four polars.

3. If two triangles be self-conjugate with respect to any circle, any two sides are divided equi-harmonically by the four remaining sides, and any two vertices are subtended equi-harmonically by the four remaining vertices.

4. Define *inverse* points, and prove that the inverse of a circle is either a line or a circle, according as the centre of inversion is on the circumference of the circle or not on the circumference.

5. Given the base of a triangle, the perpendicular, and the sum of sides; construct it.

6. Given in magnitude and position the base of a triangle and the ratio of the sides, find the locus of the vertex.

7. The feet of the three perpendiculars let fall on the sides of a triangle from any point on the circumference of the circumscribed circle are collinear.

8. Draw a common tangent to two circles.

9. If A, B, C, D, etc., be any system of n points, O their centre of mean position, P any other point, the sum of the squares of the distances of the points A, B, C, D, etc., from P exceeds the sum of the squares of their distances from O by $n\,O\,P^2$.

10. Divide a given line into any number of equal parts.

11. Inscribe a square in a given triangle.

12. Given four points A, B, C, D, in a straight line, of which C and D are harmonic conjugates to A and B, prove that the circles described on $A\ C$ and $B\ D$ as diameters intersect each other orthogonally.

THEORY OF EQUATIONS—ALGEBRA.

FRIDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Find the number and situation of the real roots of

$$x^3 - 7\ x + 7 = 0$$

2. Find the positive root of the equation

$$2\ x^3 - 85\ x^2 - 85\ x - 87 = 0$$

3. If in any equation each negative coefficient be taken positively, and divided by the sum of all the positive co-efficients which precede it, the greatest quotient thus formed increased by unity is a superior limit of the positive roots.

4. A multiple root of the order m of the equation $f\ (x) = 0$ is a multiple root of the order $m - 1$ of the first derived equation $f'\ (x) = 0$.

5. Find the roots of the equation

$$x^{10} - 3\ x^8 + 5\ x^5 - 5\ x^4 + 3\ x^2 - 1 = 0$$

6. Find the equation whose roots are those of

$$x^5 + 4\ x^3 - x^2 + 11 = 0$$

each diminished by 3.

7. Solve the equation

$$3\ x^3 - 4\ x^2 + x + 83 = 0$$

one root being $2 + \sqrt{-7}$

8. 215855 is in the denary scale of notation, find the equivalent number in the duo-denary scale.

9. Given $y^3 - axy - b^3 = 0$, find y in a series of powers of x.

10. Find the number of combinations that can be formed out of the letters of the word "Notation" taken three together.

11. Insert 2 Harmonic means between 6 and 24.

12. Prove that in any Geometrical Progression the sum of the first and last terms is greater than the sum of any other two terms taken equidistant from the beginning and end of the series.

ENGLISH LITERATURE.

Shakspere, *As You Like It*. Trench, *On the Study of Words*.

FRIDAY, 19TH SEPTEMBER :—AFTERNOON, 2 TO 5.

Examiners,..... .... { C. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. Write a short sketch of the character of Orlando.

2. Make short explanatory notes on the following :—quintain, curtal-axe, borrow me Gargantua's mouth, Cæsar's thrasonical brag, Hero of Sestos, to count atomies, a swashing and a martial outside.

3. What explanation does Jaques give of his melancholy? What is your idea of the part he plays in this comedy?

4. Is there any trace of euphuistic language and thought in *As You Like It*?

5. Give the substance of the first interview between Rosalind and Orlando, and also of that between Orlando and Jaques.

6. Shew with the help of examples that the history of England is reflected in the words that compose the language.

7. Give the origin of: caitiff, pagan, damask, blame, pineapple, pedant, pilgrim, supercilious, churl, halcyon days.

8. Explain the ways in which synonyms arise in a language, and support the explanation with illustrative examples in English other than the following. Distinguish between *Fancy* and *Imagination*, *mortal* and *deadly*.

9. Give four examples of "random" etymologies.

10. Discuss briefly the question of phonetic spelling.

FRENCH.

THURSDAY, SEPT. 18TH:—MORNING, 9 TO 12.

Examiner.....P. J. DARCY, M.A., LL.D.

1. Translate into English:—

Le lièvre et les grenouilles.

Un lièvre en son gite songeait.
(Car que faire en un gite, à moins que l'on ne songe?)
Dans un profond ennui ce lièvre se plongeait:
Cet animal est triste, et la crainte le ronge.
Les gens de naturel peureux
Sont, disait-il, bien malheureux!
Ils ne sauraient manger morceau qui leur profite:
Jamais un plaisir pur, toujours assauts divers.
Voilà comme je vis (*a*): cette crainte maudite
M'empêche de dormir sinon les yeux (*b*) ouverts.
Corrigez-vous, dira quelque sage cervelle.
Eh! la peur se corrige-t-elle?
Je crois même qu'en bonne foi
Les hommes ont peur comme moi.
Ainsi raisonnait notre lièvre,
Et cependant faisait le guet.
Il était douteux, inquiet.
Un souffle, une ombre, un rien, tout lui donnait (*c*) la fièvre.

2. (*a*) Give one person of all the simple tenses of this verb. (*b*) What is the other plural of yeux? State when the one is used and when the other. (*c*) Why is this verb in the singular? State the rules fully.

Give another case when the verb preceded by several words as subject is put in the singular.

3. Write correctly the following participles:—

Ces personnes se sont *donné* de beaux cadeaux, car elles se sont toujours bien *aimé*, and state fully the rules according to which you write them.

4. Give the *résumé* of the V act of the comedy of *l'Avare*.

5. Translate the following expressions from l'Avare:—

Tout cousu de pistoles. L'état que vous portez. Des cheveux de son cru. C'est une occasion qu'il faut prendre par les cheveux. Mangeant son blé en herbe. Je sais tirer mon épingle du jeu. Gueux comme des rats. Mauvaise herbe croît toujours.

6. Translate into French:—

You may write to him that I am here. We may do our work now, we shall play afterwards. Take that child to school. He will not go

Whether he will or not, he must go. If I could lend you some money, I would willingly do so. You might live on your salary if you were a little more economical. You should have come with us to-day, we had a most pleasant day. If your brother should come what should I tell him. I could have succeeded, if the times had not been so hard, or I had had a better chance.

CHEMISTRY.

WEDNESDAY, SEPT. 17TH :—AFTERNOON, 2 TO 5.

Examiner,..... B. J. HARRINGTON, B.A., PH.D.

1. How may the composition of Carbon Monoxide be ascertained with the eudiometer?

2. What is the weight in grams of 258 litres of Hydrogen gas, measured at—20° and 775 mm. pressure?

3. Explain the action of Sulphur Dioxide when used as an Antichlor.

4. What takes place (*a*) when Chlorine gas is passed into cold, dilute solution of Caustic Soda, (*b*) when Manganese Dioxide and Sulphuric Acid are heated together?

5. Explain the statement that the metals all possess the same atomic heat.

6. Into what classes may metallic oxides be divided? Give examples of each.

7. What reactions serve to distinguish Potassium salts from those of other metals?

8. What is the quantivalence of Silver? What compounds does Silver form with Oxygen? What are properties of Silver Chloride?

9. Explain the action of Ozone on the Hydrogen Dioxide.

10. Explain the constitution of the three Potassium Chromates.

11. State what you know with regard to the properties of Antimony and Bismuth.

12. Give examples of hydroxides, anhydrides, compound radicals, and basic salts.

CLASSICAL AND MODERN LANGUAGE SCHOLARSHIPS, 1890.

GREEK.

MONDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner, ... REV. GEORGE CORNISH, LL.D.

1. Translate:—Euripides, Medea:—

(A) *καὶ δὴ τεθνᾶσι· τίς με δέξεται πόλις;*
τίς γῆν ἄσυλον καὶ δόμους ἐχεγγύους
ξένος παρασχὼν ῥύσεται τοὐμὸν δέμας;
οὐκ ἔστι. μείνασ' οὖν ἔτι σμικρὸν χρόνον,
ἢν μέν τις ἡμῖν πύργος ἀσφαλὴς φανῇ,
δόλῳ μέτειμι τόνδε καὶ σιγῇ φόνον·
ἢν δ' ἐξελαύνῃ ξυμφορά μ' ἀμήχανος,
αὐτὴ ξίφος λαβοῦσα, καὶ μέλλω θανεῖν,
κτενῶ σορ τόλμης δ' εἶμι πρὸς τὸ καρτερόν.
οὐ γὰρ μὰ τὴν δέσποιναν ἣν ἐγὼ σέβω
μάλιστα πάντων καὶ ξυνεργὸν εἱλόμην,
Ἑκάτην, μυχοῖς ναίουσαν ἑστίας ἐμῆς,
χαίρων τις αὐτῶν τομιοῦν ἀλγυνεῖ κέαρ
πικροὺς δ' ἐγώ σφι καὶ λυγροὺς θήσω γάμους,
πικρὸν δὲ κῆδος καὶ φυγὰς ἐμὰς γθονός.

(B) *Ἐρεχθείδαι τὸ παλαιὸν ὄλβιοι,*
καὶ θεῶν παῖδες μακάρων, ἱερᾶς
χώρας ἀπορθήτου τ' ἀποφερβόμενοι
κλεινοτάταν σοφίαν, ἀεὶ διὰ λαμπροτάτου
βαίνοντες ἁβρῶς αἰθέρος, ἔνθα ποθ' ἁγνὰς
ἐννέα Πιερίδας Μούσας λέγυσι
ξανθὰν Ἁρμονίαν φυτεῦσαι·
τοῦ καλλινάου τ' ἀπὸ Κηφισοῦ ῥοὰς
τὰν Κύπριν κλήιζουσιν ἀφυσσαμέναν
χώρας καταπνεῦσαι μετρίας ἀνέμων
ἡδυπνόους αὔρας· ἀεὶ δ' ἐπιβαλλομέναν
χαίταισιν εὐώδη ῥοδέων πλόκον ἀνθέων
τᾷ σοφίᾳ παρέδρους πέμπειν ἔρωτας,
παντοίας ἀρετᾶς ξυνέργους.

2. (*a*) Ext. (A). (1) Give the exact import of *καὶ δή*. (2) *ἄσυλον ἐχεγγύους*,—give the derivation. (*b*) Note Doric forms and give Attic equivalents.

3. Write short explanatory notes on :—(*a*) *ἐς τέμενος Αἰακίας θεοῦ.* (*b*) *Ἐρεχθείδαι νεῶν παῖδες ἀκάρων.* (*c*) *ἀμοιβὰν γῆς Θεσπιῳδόν.* (*d*) *Ἰνὼ μανεῖσαν ἐκ θεῶν.*

4. Derive and explain the meaning of :

χαρακτήρ, αἰνιάδης, δυσκατάπαυστος, φροῖδα, παραμπέχειν, ἄϋπνος, οἰακοστρόφοι, ἄρκτος, τέμενος, πλημμελές.

5. Write down the scheme (1) of the Iambic Trimeter Acatalectic, and (2) of the Anapaestic Dimeter Acatalectic, indicating the isochronous feet. Scan the last four verses of ext. (A).

6. Translate, Xenophon, Hellenics, . k. I.—

(A) *Οἱ δὲ ἐν οἴκῳ Ἀθηναῖοι, ἐπειδὴ ἠγγέλθη ἡ ναυμαχία, χαλεπῶς εἶχον τῷ Ἀλκιβιάδῃ, οἰόμενοι δι' ἀμέλειάν τε καὶ ἀκράτειαν ἀπολωλεκέναι τὰς ναῦς, καὶ στρατηγοὺς εἵλοντο ἄλλους δέκα, Κόνωνα, Μιομέδοντα, Λέοντα, Περικλέα. Ἐρασινίδην, Ἀριστοκράτην, Ἀρχέστρατον, Πλωτόμαχον, Θρασύλλον, Ἀριστογένην. Ἀλκιβιάδης μέν οὖν πονήρως καὶ ἐπὶ τῇ στρατιᾷ φερόμενος, λαβὼν τριήρη μίαν ἀπέπλευσεν εἰς Χερρόνησον εἰς τὰ ἑαυτοῦ τείχη. μετὰ δὲ ταῦτα Κόνων ἐκ τῆς Ἄνδρου σὺν αἷς εἶχε ναυσὶν ἐ[illegible] ψηφισαμένου Ἀθηναίων εἰς Σάμον ἔπλευσεν ἐπὶ τὸ ναυτικόν. ἀντὶ δὲ Κόνωνος εἰς Ἄνδρον ἔπεμψαν Φαινοσθένην, τέτταρας ναῦς ἔχοντα.*

(B) *Οἱ δὲ ταῦτ' ἐπήνουν καὶ ἐκέλευον αὐτὸν τάξαι τῷ ναύτῃ δραχμὴν Ἀττικήν, διδάσκοντες ὅτι ἂν οὗτος ὁ μισθὸς γένηται, οἱ τῶν Ἀθηναίων ναῦται ἀπολείψουσι τὰς ναῦς, καὶ μείω χρήματα ἀναλώσει. ὁ δὲ καλῶς μὲν ἔφη αὐτοὺς λέγειν, οὐ δυνατὸν δ' εἶναι παρ' ἃ βασιλεὺς ἐπέστειλεν αὐτῷ ἄλλα ποιεῖν εἶναι δὲ καὶ τὰς συνθήκας οὕτως ἐχούσας, τριάκοντα μνᾶς ἑκάστῃ νηῒ τοῦ μηνὸς διδόναι, ὁπόσας ἂν βούλωνται τρέφειν Λακεδαιμόνιοι. ὁ δὲ Λύσανδρος τότε μὲν ἐσιώπησε· μετὰ δὲ τὸ δεῖπνον, ἐπεὶ αὐτῷ προπιὼν ὁ Κῦρος ἤρετο τί ἂν μάλιστα χαρίζοιτο ποιῶν, εἶπεν ὅτι Εἰ πρὸς τὸν μισθὸν ἑκάστῳ ναύτῃ ὀβολὸν προσθείης. ἐκ δὲ τούτου τέτταρες ὀβολοὶ ἦν ὁ μισθός, πρότερον δὲ τριώβολον.*

7. (*a*) *Οἰόμενοι δι' ἀμέλειαν κ. τ. λ.* :—Write a short note on the general character and conduct of Alcibiades, showing what grounds may have existed to justify the imputation here made. (*b*) *ἀμέλειαν τε καὶ ἀκράτειαν* :—Give the etymology of these words, and turn them into Latin. (*c*) *τὰ ἑαυτοῦ τείχη* :—Give the name from Cor. Nepos. (*d*) In Ext. (B) :—(1) Explain the use of the article in *τῷ ναύτῃ, τοῦ μηνὸς.* (2) *εἶπεν ὅτι κ. τ. λ.*—is there any thing peculiar in this use of *ὅτι*? (3) *οὕτως ἐχούσας*,—explain this idiom.

8. Translate: Thucydides, Bk. VI., chap. XXXI.

9. (*a*) *οὗτος ὁ στόλος*,—supply the verb to this nominative. (*b*) *ὅπως ....πρόξει*—explain this use of the Future Indicative with *ὅπως*. (*c*) Write explanatory notes on: (1) *τριηράρχων*. (2) *ὑπηρεσίας*. (3) *κατα· λόγους χρηστοὺς*. (4) *ἐπιβάται*.

10. Translate:—Herodotus, Bk. VIII., Chap. 87.

11. (*a*) *μετεξετέρους*:—derive and explain this form. (*b*) *πρὸς τῶν πελεμίων*:—Give the exact meaning of the preposition, and explain such usages as *τὰ ἐξωθεν, οἱ ἐκ τῆς νηός, τὸ ἀπ' ἐσπέρης κέρας*. (*c*) *συνήνεικε*:—express in Latin.

12. Translate: Demosthenes, Olynthiacs, I., §§ 14-15; III., § 34.

(*a*) *ὃς τις ἀγνοεῖ*: what other construction might have been employed? (*b*) Explain the construction of the following verbs: *γνῶτε, χρῆται, ἔλθωμεν, προϊέσθαι, ποιεῖν*.

LATIN.

TUESDAY, SEPT. 16TH:—AFTERNOON, 2 TO 5.

Examiner, ...REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Horace, Satires, I, III, vss. 111-128.

2. (*a*) Show the connection with the rest of the Satire. (*b*) Explain *fastos*. Why *evolvere*? (*c*) Who was Chrysippus?

3. Sketch the argument of Satire IX, without translating. What is the allusion to *divina urna*, v. 30?

4. Translate:—(B) Horace, Epistles, Bk. I., ep. XVIII, vss. 1-20.

5. (*a*) Scan vs. 3 of ext. (B), pointing out any peculiarity of quantity. (*b*) *Imi lecti*:—explain, and illustrate by a sketch of the arrangement of the Roman dinner-table. (*c*) *Magistro*:—with what do you construe this?

6. Translate:—(C) Virgil, Georgics, Bk. I., vss. 450-468.

(*a*) Scan line 456, and account for the quantity of the penult of fervere. (*b*) What physical event is referred to in vss. 467-469. (*c*) Emenso olympo: what is peculiar in this construction?

7. Translate:—(D) Adelphi, Act II., sc. 4, vss. 7-23.

8. Translate:—(E) Tacitus, Annals, Bk. I., chap. 72.

9. Write explanatory notes on:—(*a*) Populo et plebi quadringenties tricies quinquies dedit. (*b*) Quotus quisque reliquus qui rem publicam vidisset. (*c*) Triumphalia insignia. (*d*) Nec in acta sua iurari.

10. Translate the following, explaining the constructions:—(*a*) Nullius flagitii compertum. (*b*) Abolendae infamiae. (*c*) Particeps secretorum. (*d*) Extortum invito senatu.

11. Translate, Pliny, Select Letters:—Ridebis et licet rideas. Ego ille quem nosti apros tres et quidem pulcherrimos cepi. Ipse? inquis. Ipse; non tamen ut ommino ab inertia mea et quiete discederem. Ad retia sidebam; erat in proximo non venabulum aut lancea, sed stilus et pugillares; meditabar aliquid enotabamque, ut, si manus vacuas, plenas tamen ceras reportarem. Non est quod contemnas hoc studendi genus: mirum est ut animus agitatione motuque corporis excitetur. Iam undique silvae et solitudo, ipsumque illud silentium, quod venationi datur, magna cogitationis incitamenta sunt. Proinde cum venabere, licebit auctore me ut panarium et lagunculam sic etiam pugillares feras; experieris non Dianam magis montibus quam Minervam inerrare. Vale.

12. Derive and describe:—venabulum, lancea, stilus, pugillares, panarium, lagunculam.

GREEK AND LATIN PROSE COMPOSITION.

Monday, September 15th:—Afternoon, 2 to 5.

Examiner, ... Rev. George Cornish, LL.D.

(A) Translate into Greek:—

1. After this battle the Athenians did very great injury to the whole country of the Lacedæmonians.

2. The soldiers marched out of the city in number about two thousand, and in no long time arrived in the enemy's country, which they at once began to ravage.

3. Man seems to differ from other animals in this, namely, in his striving after honour.

4. He said that he was willing to do those things, if by so doing he could benefit his fellow-citizens.

5. The being rich profits men nothing if they do not know how to make a wise use of their wealth.

(B) Translate into Latin:—

But the consuls, being suspected by the plebeians, were to raise an army. And so they sent ambassadors to the Volsci to ask what their demands were. And to them Coriolanus answered that they must restore

their lands and towns to the Volsci, and receive them into their friendship by a treaty equal to that with the Latins. Then they sent the priests, pontiffs, and augurs, to beseech him to grant them fair terms of peace. And they having been received with honour departed nevertheless without success. Then his mother and the ladies of Rome determined to try what they could do with him. And when they had come to the camp, and had been brought to him, his mother asked whether he was to her C. Marcius or the general of the Volscians. Was it to her alone that the ruin of her country was owed? She indeed was too old to live long. But let him consider his wife and children, who must be enslaved with their country. And Coriolanus, moved by these complaints, exclaimed that his mother had saved Rome, but had lost her son. Then he led away the army, on the ground that the city was too strong to be taken.

ANCIENT HISTORY.

TUESDAY, SEPT. 16TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. What are the sources of written history as enumerated by Rawlinson?

2. (*a*) Define the geographical position of Phoenicia, and name the chief cities. (*b*) Give an account of the colonisation and commercial enterprise of the Phoenicians.

3. Sketch the history of Athens from the death of Solon to the battle of Marathon.

4. (*a*) Describe the nature and object of the reforms of Clisthenes.

5. When and by whom were the following peoples or countries brought under the dominion of Rome: the Latins, Sicily, Gaul, Macedonia, Egypt?

6. State briefly what you know of Spurius Maelius, Papirus Cursor, Sejanus, Curius Dentatus, Appius Claudius Cæcus, Hamilcar Barca.

7. Give an account of the Persian expedition under Datis and Artaphernes.

8. Write upon any two of the following subjects:—(1) Antony and Cleopatra. (2) The struggle of Sextus Pompeius against the triumvirs. (3) Chief events from January 1, B. C. 43, to the death of Brutus.

9. Describe briefly the struggle between Sparta and Thebes.

10. Sketch the rise and growth of the Persian empire.

11. Give an account of the Sicilian expedition (with a plan of the Athenian operations near Syracuse).

ENGLISH LITERATURE.

Shakspere, *The Tempest*, and Trench, *On the Study of Words.*

WEDNESDAY, 17TH SEPTEMBER:—AFTERNOON, 2 TO 5.

Examiners,..... { C. E. MOYSE, B.A. / P. T. LAFLEUR, M.A. ,

1. Assign a probable date for the composition of *The Tempest*, and give reasons for so doing.

2. What is meant by the groupings of characters in the drama? Illustrate your remarks from this play.

3. Make notes on the character of Prospero, supporting your opinion with quotations from the texts.

4. Explain the meaning of:—pied ninny, to trash for overtopping, doit, gaberdine, hest, mountaineers dew-lapped like bulls, on a trice.

5. Relate the events contained in Act First.

6. Give six examples of familiar words containing metaphors.

7. Write short etymological notes on:—Mont Pilate, Sierras, Port Natal, daisy, eau-de-vie, camelopard, dactyle, candidate, trivial, gossamer, limner.

8. Explain, with examples, what is meant by "degeneration" of word and "elevation" of words, in their moral significations.

9. What are "question-begging" words? Besides examples from Trench, write some that you may have met with elsewhere.

10. Under what circumstances is it justifiable to coin new words, and what conditions should be fulfilled in order to render new words worthy of adoption?

ENGLISH LITERATURE.

SPALDING (*in parts*); MILTON, *Paradise Lost, Books I and II.*

WEDNESDAY, 17TH SEPTEMBER:—MORNING, 9 TO 12.

Examiners,..... { C. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. State briefly what is meant by the "Four Stages" of the Elizabethan and Jacobean drama.

2. Who constituted the "metaphysical school" of poetry? Make a few notes on the poetical work of its chief representative.

3. Give the author and date of each of the following:—Venice preserved, Tamburlaine, Hudibras, Tale of a Tub, Pleasures of the Imagination, The Wealth of Nations, The Task, Lyrical Ballads. Name the department of literature to which each belongs, and give, in outline, the substance of any one.

4. Classify writings of fiction. Attempt to give some reason for the immense production of novels in the nineteenth century.

5. Write the names of two authors and one work for each in the following departments of English literature during the periods studied. Give approximate date:—

(*a*) Classical commentary.

(*b*) Modern European History.

(*c*) Pastoral poetry.

(*d*) Familiar essay.

(*e*) Controversal theology.

(*f*) Literary criticism.

6. What is the date of publication of *Paradise Lost?* Under what, inspiration and circumstances was it composed?

7. Give the substance of the events from Satan's first words to his prophecy of the appearance of Man on earth. Quote here and there from the text.

8. "Milton's vocabulary and style are scholarly." Support this statement fully.

9. Explain the following references:—The calf in Oret, Uther's son Alcides felt the envenom'd robe. When Charlemain with all his peerage fell by Fontarabbia, Vallombrosa.

ENGLISH COMPOSITION.

THURSDAY, 18TH SEPTEMBER:—AFTERNOON, 2 TO 5.

Examiners,..... { C. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. What is meant by *Purity*, as applied to the choice of words? Illustrate with examples.

2. Correct or improve the following sentences, giving in each case the ground for the change:—

a. Having no hope of his recovery, it was thought better to let him be.

b. This individual claims he is older than me.

c. I have gotten me a copy of Burke's Works.

3. What objection may be urged against the use of:—electricute, cablegram, scientist, locomotive, æsthetic (in the popular sense), Renascence (instead of Renaissance)?

4. Write an essay of at least two pages on one of the following subjects:—

1. Justifiable warfare.
2. The Pen is mightier than the Sword.
3. A character from Contemporary Fiction.

FRENCH.

THURSDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., LL.D.

1. Traduisez en anglais:—

Bélise.—Ah! certes, le détour est d'esprit, je l'avoue:
Ce subtil faux-fuyant mérite qu'on le loue;
Et, dans tous les romans où j'ai jeté les yeux.
Je n'ai rien rencontré de plus ingénieux.

Clitandre.—Ce n'est point du tout un trait d'esprit, madame,
Et c'est un pur aveu de ce que j'ai dans l'âme.
Les cieux, par les liens d'une immuable ardeur,
Aux beautés d'Henriette ont attaché mon cœur;
Henriette me tient sous son aimable empire,
Et l'hymen d'Henriette est le bien où j'aspire.
Vous y pouvez beaucoup; et tout ce que je veux,
C'est que vous y daignez favoriser mes vœux.

Bélise.—Je vois où doucement veut aller la demande,
Et je sais sous ce nom ce qu'il faut que j'entende,
La figure est adroite; et, pour n'en point sortir,
Aux choses que mon cœur m'offre à vous repartir,
Je dirai qu'Henriette à l'hymen est rebelle,
Et que sans rien prétendre, il faut brûler pour elle.

Les Femmes Savantes, A. 1, Sc. IV.

2. Faites le résumé du Vme acte des *Femmes Savantes*.

3. Répondez à la même question pour *Britannicus*.

4. Faites une liste de 6 auteurs du XVIe siècle, et dites en quel genre de littérature chacun de ces auteurs s'est illustré. Citez quelques-uns de leurs ouvrages.

5. Répondez à la même question pour les auteurs du XVIIe siècle.

6. Traduisez en français :—

The first literary work d'Emile Souvestre was a drama entitled "The Siege of Missolongi;" but this, like many other works of its class, was never produced on the stage. The misfortunes of his family soon compelled him to devote himself to making money, and in eighteen twenty-eight he became a bookkeeper in Nantes. He did not, however, entirely renounce literature, but published numerous articles in various periodicals the most noted of which was a series entitled "Les Derniers Bretons" which appeared in "La Revue des Deux Mondes." These established his reputation as a writer of taste, and during the next twenty years he wrote a large number of stories and tales, most of which were originally published in newspapers and reviews. His constant aim was not only to please the reading public, but also to inculcate the principles of sound morality.

MATHEMATICAL SCHOLARSHIPS, 1890.

ANALYTICAL GEOMETRY. (*First Paper*).

MONDAY, SEPT. 15TH:—MORNING, 9 TO 12.

Examiner,.... ....ALEXANDER JOHNSON, LL.D.

1. Prove that two conic sections will be similar and similarly placed if the co-efficients of the highest powers of the variables are the same in both, or only differ by a constant multiplier.

2. If a pair of radii be drawn though a centre of similitude of two similar conics, the chords joining their extremities will be either parallel or will meet on the chord of the intersection of the conics.

3. Prove that the radius of curvature at any point of an ellipse is equal to $\frac{b'}{a}\frac{3}{b}$

4. Two vertices of a *given* triangle move along fixed right lines, find the locus of the third vertex.

5. The locus of the extremity of the perpendicular from the focus on a tangent to the parabola is the tangent at the vertex.

6. If any line cut an hyperbola, the portions intercepted between the curve and its asymptotes are equal.

7. The focal radii to any point of an ellipse make equal angles with the tangent at the point.

8. Find the equation of a circle, the axes being a tangent, and any line through the point of contact.

9. Given the base and product of tangents of base angles, find the locus of the vertex of the triangle.

10. Prove that all the lines corresponding to different values of m in the equation $mx - 5y - 10 = 10$, pass through a fixed point, and find the point

11. Find the equations of the lines joining the middle points of the sides of the quadrilateral whose vertices are the points 1,3 ; 5,7 ; 8,4 ; 6,2, and show that they form a parallelogram.

12. Find the equation of a line passing through a given point and making a given angle with a given line $ax + by + c = 0$:

1°—When the axes are rectangular.

2°—When the axes are oblique.

ANALYTICAL GEOMETRY—(*Second Paper*)

TUESDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the equation of a conic passing through the points where a given conic S = 0 meets the axes.

2. The anharmonic ratio of a pencil whose sides pass through four fixed points of a conic, and whose vertex is any variable point of it, is constant.

3. If two conics have each double contact with a third, their chords of contact with the third conic, and a pair of their chords of intersection with each other, will all pass through the same point and will form an harmonic pencil.

4. Prove for a conic section Pascal's theorem concerning an inscribed hexagon.

5. Find the co-ordinates of the centre of curvature at any point of an ellipse.

6. The three perpendiculars of the triangle formed by three tangents to a parabola intersect on the directrix.

7. Show that the locus of the intersection of tangents to an ellipse at the extremities of conjugate diameters is $\frac{x^2}{a^2} + \frac{y}{b^2} - 2 = 0$

8. Find the equation of the circle circumscribing the triangle formed by the lines $\alpha = 0$, $\beta = 0$, $\gamma = 0$.

9. Find the condition that two lines

$$l\alpha + m\beta + n\gamma = 0$$
$$l'\alpha + m'\beta + n'\gamma = 0$$

shall be mutually perpendicular.

10. Get an expression for the anharmonic ratio of four lines $\alpha - k\beta = 0$ $\alpha - l\beta = 0$, $\alpha - m\beta = 0$, $\alpha - n\beta = 0$.

11. Given n fixed right lines, and a fixed point O, if through this point any radius rector be drawn meeting the right lines in the points p, q, r, etc., and on this a point R be taken such that

$$\frac{n}{OR} = \frac{1}{Op} + \frac{1}{Oq} + \frac{1}{Or} + \text{etc.}$$

find the locus of R.

12. Find how many conditions must be satisfied in order that the general equation of the n^{th} degree may represent right lines.

CALCULUS.—(*Third Paper.*)

THURSDAY, SEPTEMBER 18TH:—MORNING. 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. Using the eccentric angle, prove that the radius of curvature in the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

has the value $\dfrac{(a^2 \sin^2\phi + b^2 \cos^2\phi)^{\frac{3}{2}}}{ab}$

2. Find an expression for the differential of an arc in polar co-ordinates. Prove that in the logarithmic spiral $r = a\theta$, the angle between the radius rector and the tangent is constant.

3. Find the equation of the normal at any point on the curve $y^m = ax^n$.

4. Find the maximum and minimum values of u when.

$u = a \cos x + b \cos 2x$, a and b being both positive.

5. Given one angle of a right-angled spherical triangle, find when the difference between the sides which contain it is a maximum.

6. State and prove Lagrange's theorem for the expansion of any function of z in ascending powers of y, being given the equation

$$z = x + y\,\phi(z)$$

in which x and y are independent variables.

7. Find the value of $\dfrac{x - \sin x}{x^3}$ when $x = 0$.

8. The surface of a sphere (radius $= r$) cut off by a plane whose distance from the centre is d is equal to $2\pi r(r - d)$.

9. The base of a cylinder is a circle whose area is equal to the surface of a sphere of radius 5 feet; being given that the volume of the cylinder is equal to the sum of the volumes of two spheres of radii, 9 feet and 16 feet, find the height of the cylinder.

10. Taking the equation of the catenary $y = \frac{a}{2}\left(e^{\frac{x}{a}} + e^{-\frac{x}{a}}\right)$ find the length of the curve.

11. Find the whole area between the curve

$$x^2 y^2 + a^2 b^2 = a^2 y^2.$$

and its asymptotes.

12. Find an expression for the area of any curve in polar co-ordinates

13. Find the following integrals

$$\int \frac{(2\cos x + 3\sin x)\,dx}{3\cos x + 2\sin x} : \quad \int e^x (\cos x + \sin x)\,dx.$$

14. Find the integrals

$$\int \frac{(x^2+1)dx}{x\sqrt{1+x^4}} : \quad \int dx\sqrt{x+\sqrt{2+x^2}}$$

15. Find the formula of reduction for

$$\int \cos^m x \sin nx\,dx$$

16. Integrate

$$\int \frac{dx}{(1+x^3)^{\frac{4}{3}}} : \quad \int \tan^n \theta\,d\theta : \quad \int \frac{d\theta}{\sin\theta\cos^3\theta}$$

$$\int \sin^3\theta\,d\theta : \quad \int x\log x\,dx : \quad \int \frac{dx}{(1+x)\sqrt{1-x^2}}$$

HIGHER ALGEBRA.—THEORY OF EQUATIONS.—PLANE AND SPHERICAL TRIGONOMETRY.

(*Fourth Paper*).

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Prove that if s^p denote the sum of the p^{th} power of the roots α, β, etc., of an equation, then

$$\begin{vmatrix} s_0, & s_1, & s_2, \\ s_1, & s^2, & s^3, \\ s_2, & s_3, & s_4, \end{vmatrix} = \Sigma\,(\alpha-\beta)^2\,(\beta-\gamma)^2\,(\gamma-\alpha)^2$$

2. The product of two determinants is the determinant whose constituents are the sums of the products of the constituents in any row of one by the corresponding constituents in any row of the other.

3. If the constituents of one row or column of a determinant are respectively equal to the sum of the corresponding constituents of other rows or columns, multiplied respectively by constant factors, the determinant vanishes.

4. Calculate the determinant:—

$$\begin{vmatrix} 9, & 13, & 17, & 4 \\ 18, & 28, & 33, & 8 \\ 30, & 40, & 54, & 13 \\ 24, & 37, & 46, & 11 \end{vmatrix}$$

5. Solve the equation $x^4 - 6x^2 - 8x - 3 = 0$.

6 Apply Newton's method to calculate the root between 3.2 and 3.3 of the equation $x^3 - 24x + 44 = 0$.

7. Solve the equation $8x^6 - 16x^4 - 25x^3 - 16x^2 + 8 = 0$.

8. If the roots of the equation $x^3 + px^2 + qx + r = 0$ are a, b, c, find the equation whose roots are $b + c$, $c + a$, $a + b$.

9. The two angles of a right angled spherical triangle are 39° 42′, and 74° 26′; find the hypotenuse.

10. The angles of a spherical triangle are 114° 30′, 38° 12′ and 123° 20′, find the side opposite the first given.

11. In any spherical triangle

$$\sin c \cot a = \cot A \sin B + \cos B \cos c.$$

a. Throw the right-hand side of this equation into the form $K \sin (B + D)$, finding the values of K and D.

12. Any two sides of a spherical triangle are together greater than the third.

13. Express the *sine* of any angle by means of imaginary exponential functions of the angle itself.

MATHEMATICAL AND NATURAL SCIENCE SCHOLARSHIPS, 1890.

LOGIC.

WEDNESDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiners,..... J. CLARK MURRAY, LL.D. / P. T. LAFLEUR, M.A.

1. Define, distinguish between, and illustrate with examples:—Singular and General names, Relative and Absolute names.

2. What are the divisions of ambiguous words? Give an example of each kind. State also the difference between *clearness* and *distinctness*, as applied to names.

3. Use the Eulerian diagrams to represent the following propositions; give the contradictory in each case; and convert.

4. Explain briefly and illustrate:—Illicit process of major, Undistributed Middle, Camestres, Enthymeme, Fallacies of Amphibology.

5. What is your idea of the difference between *Deductive* and *Inductive* inference?

6 What, in scientific employment, is the meaning of the word Cause? How does this differ from popular usage?

7. State clearly the difference between Theory and Hypothesis.

NATURAL SCIENCE SCHOLARSHIPS, 1890.

FIRST PAPER.

TUESDAY, SEPTEMBER 16TH:—9 TO 12 A.M.

Examiner,.....D. P. PENHALLOW, B.Sc.

1. Enumerate the Carbohydrate products of the plant, isomeric with cellulose.

2. Explain the application of the term *intercellular substance*, and show (1) under what circumstances it is formed, and (2) how it differs from the ordinary cell wall.

3. Give the formula and percentage composition of cellulose. Show what chemical and physical changes take place when normal cellulose is converted into lignin and cutin.

4. Show what agencies are concerned in the fertilization of plants.

5. Explain fully the character of the roots in Bryophytes, Pteridophytes, Monocotyledons, Dicotyledons.

6. A given point on a tree is found to be elevated in the course of a few years. Give an explanation of this phenomenon.

7. A tree is completely girdled. Show what results will follow, and how sensible injury may be avoided.

8. Explain the structure and function of a bud. Show how it determines and modifies the direction of growth.

9. State the general law of phyllotaxis, and show how it may be determined.

10. Show how the age of a tree may be determined, and to what extent such results are reliable.

BOTANY.

SECOND PAPER.

TUESDAY, SEPTEMBER 16TH, 1890:—2 TO 5 P.M.

Examiner, ... D. P. PENHALLOW, B.Sc.

1. Give the characteristics of *Anacardiaceæ* and *Vitaceæ*. Enumerate, the Canadian genera of each, and show what economic value they possess.

2. Give the distinguishing characteristics of the Coniferæ. Enumerate the genera of this family; show which have Canadian representatives and what economic value they possess.

3. Give the North American distribution of *Magnolia, Quercus, Castania Populus, Thuya, Pinus, Acer.*

4. Outline the life history of a moss.

5. Outline the life history of a fern.

6. State some of the principal ways in which dissemination of plants is accomplished. Examples.

7. Enumerate, as far as you can, Canadian plants known to have been introduced.

8. Give the characteristics and economic values of the following:—*Liliaceæ, Scrophulariaceæ, Compositæ Rosaceæ.* Cite an indigenous member of each.

Examination of plants Thursday, 9 to 12 a.m.

CHEMISTRY.

WEDNESDAY, SEPT. 17TH:—AFTERNOON, 2 TO 5.

Examiner,..... ....B. J. HARRINGTON, B.A., PH.D.

1. What weights of Nitre and Sulphuric Acid are necessary for the production of 100 grams of Nitric Acid? How many grams of Potassium Sulphate will remain?

2. Give the names and formulæ of the Chlorine Acids

3. How would you prepare either of the following salts:—Sodium Thiosulphate, Potassium Chlorate?

4. State what you know with regard to the sources and properties of Selenium and Tellurium.

5. How are the two Chlorides of Tin prepared? What are their uses?

6. Into what classes are metallic salts divisible?

7. What are compound Ammonias? Give examples.

8. Briefly describe the processes ordinarily employed for the estimation of Carbon, Hydrogen, Nitrogen and Oxygen in organic bodies.

9. What do you understand by Dihydric Alcohols? What acids are produced by their oxydation?

10. Distinguish between simple and mixed Ethers, giving examples.

11. Name several of the principal Glucorides, and briefly state their properties.

12. Explain the relation of Napthalene and Anthracene to Benzine.

SUPPLEMENTAL EXAMINATIONS, SEPT., 1890.

FIRST YEAR.

A.—LATIN.

1. Translate:—Cicero M. Varroni S.

Ex iis litteris, quas Atticus a te *missas* mihi legit, quid ageres et ubi *esses* cognovi, quando autem te visuri essemus nihil sane ex iisdem litteris potui suspicari. In spem tamen venio appropinquare tuum adventum: qui *mihi* utinam *solacio sit!* Etsi tot tantisque rebus

urgemur, nullam ut levationem quisquam non stultissimus sperare debeat: sed tamen aut tu potes me aut ego te fortasse aliqua re iuvare. Scito enim me, postea quam in urbem venerim, redisse cum veteribus amicis, id est, cum libris nostris, in gratiam: etsi non idcirco eorum usum dimiseram, quod iis *succenserem*, sed quod *eorum* me suppudebat. Videbar enim mihi, quum me in res turbulentissimas, infidelissimis sociis, demisissem, praeceptis illorum non satis paruisse. Ignoscunt mihi, revocant in consuetudinem pristinam teque, quod in eo permanseris, sapientiorem quam me dicunt fuisse. Quam ob rem, quoniam placatis *iis* utor, videor sperare debere, si te *viderim*, et ea, quae premant, et ea, quae impendeant, me facile transiturum. Quam obrem sive in Tusculano sive in Cumano ad te placebit sive, quod minime velim, *Romae*, dum modo simul simus, perficiam profecto, ut id utrique nostrum commodissimum esse videatur.

2. Carefully explain the construction of italicized words.

3. Translate into Latin :—

When Cæsar had heard what the envoys said, he demanded their senate and the children of their leaders as hostages. He explained to Divitiacus how greatly it concerned the Roman people that he should lead the forces of the Aedui into the country of the Bellovaei and lay waste their lands. After giving these instructions he sent off scouts, who soon reported that the Belgae were not far off.

B.—GREEK.

1. Translate, Odyssey, XXIII., 152-172; XXIV., 142 150.

2. (*a*) Explain the forms *εἰπεσκε, ἴσαν, ᾠ, ἐνί, χρῖσεν' ἔειπεν, ἀλλυουσαν* (v. 145). (*b*) Explain the construction of *εἰσιδέειν, τῷ* (v. 162), *κεφαλῇ, δέμας, ἀλόχου.*

3. Scan lines 170-172, marking the Cæsura of each verse. Note any peculiarities of the Homeric Hexameter.

C.—GREEK AND ROMAN HISTORY.

1. Give a brief account of the legislation of Lycurgus; of the legislation of Solon.

2. Where were Tarentum, Thermopylae, Trasimenus, Munda, Mantincia, Mycale, Afrigentum, Nola?

3. Trace the most important political events and constitutional changes at Rome, with dates, from the period of the expulsion of the kings down to the Punic Wars.

4. Explain the duties of a Dictator, Praetor, Tribunus, Consul.

5. Describe (or show by map) the river system of Greece.

SECOND YEAR.

A.—GREEK.

1. Translate: Euripides, Medea, vss.

2. Give the principal parts, and show the formation of the following verbs from the simple stem or root: *δέδυκα, ἐλᾶν, ἀνέπτα, ἐπανέστα ἐδήχθην, ἐτμέθην.*

3. Derive and explain the meaning of: *χαρακτήρ, αὐθάδης, δυσκατάπαυστος, ὀρῳδα, παραμπέχειν, ἄϋπνος, οἰακοστρόφοδον, ἄφυκτος.*

4. Translate and explain any peculiar construction or form:—

(*a*) *νῦν ἀτιμασας ἐχει.* (*b*) *οὐκ οἶδ' ἂν εἰ πείσαιμι.*

(*c*) *ἀπωλόμεσθ' ἄρ' εἰ κακὸν προσοίσομεν*
νέον παλαιῷ, πρὶν τόδ' ἐξηντλῆκέναι.

(*d*) *λέγ' εἴ τι βούλει, χειρὶ δ' οὐ ψαύσεις ποτέ.*

(*e*) *δύστανος ἐγὼ μελέα τε πόνων,*
ἰώ μοί μοι, πῶς ἂν ὀλοίμαν;

5. Name and describe the metres in which 4 (*c*) and 4 (*e*) are written.

B.—LATIN.

1. Translate, Horace, Epistles, Bk. II.: (*a*) Ep. II. 195-205; (*b*) Ep. III. 270-277.

2. (*a*) Explain the relation to the context of extract (*a*). (*b*) Write a brief note upon each of the following: *ruentis acervi* (I. 47); *silvas Academi* (II. 45); *Bioneis sermonibus* (II. 60); *Tyrrhena sigilla* (II. 180); Genius (II. 187); *nummorum milibus octo* (II. 5); *Helicona virentem* (III. 218).

3. Explain the construction of the following words in extract (*b*): *dicam, dicto, canerent, peruncti faecibus ora.*

C.—LATIN PROSE COMPOSITION.

As the cavalry engagement had gone in favor of the King, the legions became filled with a hope of gaining the town, and with an enthusiastic desire to make the assault, wishing to show that unmounted troops were no whit inferior to horsemen. The King himself thought it best to follow up the foe, before they could recover from their panic and flight. With this resolution, he struck his camp about midnight, and, using as guides the prisoners of yesterday, found out the fordable places of the marsh, and carried his army across. On reaching the foot of the slope, he drew up his line of battle, and moved upon the gates.

TUESDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

TRIGONOMETRY—ALGEBRA.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. State and prove the rule for extracting the root of a number by logarithms. (*a*) Apply it to find the fifth root of 2 to three places of decimals, and verify the result.

2. Find by the tables the logarithm of the sine of 23° 36′ 10.″

3. The three sides of a triangle are 374.5, 576.2 and 759.3 feet respectively; find the angle A.

4. Two ships leave harbor together, one sailing N.E. at the rate of $7\frac{1}{2}$ miles an hour, and the other sailing North at the rate of 10 miles an hour. Prove that the distance between the ships after an hour and a half is 106. miles.

5. The height of the top of a church spire is known to be 150 feet from the ground, from a certain point on the ground the angle of elevation is found to be 45°, find the distance of this point from the point directly under the top of the spire.

6. Prove

$$\cos (A + B) = \cos A \cos B - \sin A \sin B$$

$$\tan (A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$$

(*a*) If $A = B = 22\frac{1}{2}°$, find tan A

7. Find the number of seconds in the unit of circular measure (the *radian*).

8. Solve the equations:—

(*a*) $\dfrac{x+4}{3x-8} = \dfrac{x+5}{3x-7}$

(*b*) $\dfrac{1}{a} - \dfrac{1}{x} = \dfrac{1}{x} - \dfrac{1}{b}$

(*c*) $3x - 5y = 4$, $4x + 2y = 14$;

(*d*) $(x + 1)(2x + 3) = 2(x + 1)^2 + 8$

9. Six horses and seven cows can be bought for $1250; and thirteen cows and eleven horses can be bought for $2305. What is the value of each animal.

10. Resolve into factors $14x^2 + 29x - 15$.

11. Reduce to the lowest terms

$$4x^3 + 3ax^2 + a^3$$

$$x^4 + ax^3 + a^3x + a^4$$

12. Prove that the square root of a rational quantity cannot be partly rational and partly a quadratic surd.

FACULTY OF APPLIED SCIENCE.

ENTRANCE EXAMINATIONS, &c.,

SEPTEMBER, 1890.

FACULTY OF APPLIED SCIENCE.

SECOND YEAR MATRICULATION.

Note.—For First Year Matriculation, see Faculty of Arts.

MATHEMATICS (*First Paper*).

TUESDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.30.

Examiner, ... G. H. CHANDLER, M.A.

ARITHMETIC.

1. Express a chain in inches, in feet and in rods. Calculate the number of square chains in an acre.

2. A mixture of gold and silver weighs 5 lbs. Troy; the weight of the gold is $\frac{3}{4}$ of the weight of the silver. What is the value of the mixture, assuming silver to be $1.50, and gold 14 times as much, per oz.?

3. The two sides of a right-angled triangle are 6.34 and 4.36; calculate (to 3 decimal places) the length of the hypotenuse.

ALGEBRA.

4. Reduce the fractions

$$\frac{x^4 + 3x^3 + x + 3}{x^3 - 8x + 3} \text{ and } \frac{7x^2 - 23xy + 6y^2}{5x^3 - 18x^2y + 11xy^2 - 6y^3}$$

to their lowest terms.

5. Find the square root of

$$a^2 b^{-2} + 2a b^{-1} + 3 + 2a^{-1} b + a^{-2} b^2$$

6. Solve the equations

(1) $$\frac{5x}{x+4} - \frac{3x-2}{2x-3} = 2,$$

(2) $$\left\{\begin{array}{l} 2(x-y) = 3z - 2, \\ x + 1 = 3(y + z), \\ 2x + 3z = 4(1-y) \end{array}\right\}$$

(3) $$\left\{\begin{array}{l} x^2 y = 48 \\ x y^2 = 36 \end{array}\right\}$$

7. A line 10 inches long is divided into two parts so that the square on one part is equal to the rectangle contained by the whole line and the other part; find the lengths of the two parts.

GEOMETRY.

8. In obtuse-angled triangles the square on the side subtending the obtuse angle exceeds the squares on the sides containing it, by twice the rectangle contained by either of these sides and the straight line intercepted between the obtuse angle and the foot of the perpendicular from the opposite angle.

9. If two chords of a circle intersect one another, the rectangle contained by the parts of the one shall be equal to the rectangle contained by the parts of the other.

10. If two triangles have one angle of the one equal to one angle of the other, and the sides about the equal angles proportional, the triangles shall be similar.

11. Describe a figure which shall be similar to one given rectilineal figure and equal to another.

12. If two straight lines in one plane are parallel respectively to two straight lines in another plane, the first two and the other two shall contain equal angles.

N.B.—Candidates must pass in each subject. Examination in Trigonometry at 2 P.M.

SECOND YEAR MATRICULATION.

MATHEMATICS (*Second Paper*).

TUESDAY, SEPTEMBER 16TH:—AFTERNOON 2 TO 5.

Examiner..... .....G. H. CHANDLER, M.A.

1. Show that

(1) $\cos(180^\circ - A) = -\cos A$,

(2) $\cos(A - B) = \cos A \cos B + \sin A \sin B$,

(3) $\sin(A + B)\sin(A - B) = (\sin A + \sin B)(\sin A - \sin B)$,

(4) $\dfrac{\sin A + \sin B}{\cos A + \cos B} = \tan\left(\dfrac{A + B}{2}\right)$

2. If any triangle

(1) $\cos\dfrac{A}{2} = \sqrt{\dfrac{s(s-a)}{bc}}$,

(2) $\sin 2A + \sin 2B + \sin 2C = 4 \sin A \sin B \sin C$.

3. In the triangles in which

(1) $a = 831$, $b = 536$, $C = 16^\circ\ 28' 40''$,

(2) $a = 15.32$, $b = 21.56$, $c = 16.22$,

show that

(1) $A = 137^\circ\ 54' 3''$, $B = 25^\circ\ 37' 17''$, $c = 351.6$.

(2) $A = 45^\circ\ 9' 17''$, $B = 86^\circ\ 11' 55''$, $C = 48^\circ\ 38' 53''$.

4. A line AB, 400 yards long, is measured along the bank of a river, and a point C close to the opposite bank is observed from A and B ; the angle $CAB = 50^\circ$ and $CBA = 65^\circ$; find the perpendicular breadth of the river.

SCOTT EXHIBITION.

MATHEMATICS.

TUESDAY, SEPTEMBER 16TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Construct the circle whose equation is $x^2 + y^2 - 2x + 6y - 3 = 0$ and find the equation of that diameter of it which passes through the origin.

2. Find the equation of the line joining the centres of the circles $x^2 + y^2 - 2x - 4y - 20 = 0$ and $x^2 + y^2 - 14x - 16y + 100 = 0$; also their chord of intersection ; and show that these two lines are at right angle to one another.

3. Find the equation of the tangent at any point of a parabola

4. The major axis of the ellipse $9x^2 + 16y^2 = 144$, and the axis of a parabola are in one straight line and the vertex of the parabola is at the centre of the ellipse ; find the points of intersection of the curves, the latus rectum of the parabola being equal to the minor axis of the ellipse.

5. Show that

(*a*) $d \tan^{-1}\left(\frac{2x}{1-x^2}\right) = \frac{2\,dx}{1+x^2}$,

(*b*) $d \log \sin^2 x = 2 \cot x\, dx$,

(*c*) $d \log \tan\left(\frac{\pi}{4} + \frac{x}{2}\right) = \frac{dx}{\cos x}$,

(*d*) $d\,x^x = x^x(1 + \log x)\, dx$

6. Also that

(*a*) $\int \frac{2x\,dx}{(1+x^2)^2} = -\frac{1}{1+x^2}$,

(*b*) $\int_a^{2a} \sqrt{x-a}\;dx = \frac{2}{3}\,a^{\frac{3}{2}}$,

(*c*) $\int_0^{\frac{\pi}{4}} \frac{dx}{\cos^2 x} = 1$

(*d*) $\int_0^{\frac{\pi}{4}} \tan^2 x\,dx = 1 - \frac{\pi}{4}$

7. How large a cylinder can be cut from a given cone?

8. State the rule for finding points of inflexion, and show that the curve $x^3 + y^3 = a^3$ meets the axes in points of inflexion.

9. Find the area included between the curve $y^2(1 - x^2) = 4$ and its asymptotes.

10. The volume of a prolate spheroid in two-thirds of the volume of the circumscribed cylinder.

BRITISH ASSOCIATION EXHIBITION.

MATHEMATICS, ETC.

TUESDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. Find the equation of the tangent and normal to the circle $(x-2)^2 + (y-3)^2 = 10$, at the point (5, 4).

2. Find the equation of a parabola which is described about the triangle whose vertices are (0,0), (3,2), (3, − 2).

3. Prove that the tangents at the extremities of the latus rectum of an ellipse intercept on the minor axis a length equal to the major axis.

4. Show that

(*a*) $d \log \sin^2 x = 2 \cot x\,dx$,

(*b*) $d \log \tan\left(\frac{\pi}{4} + \frac{x}{2}\right) = \frac{dx}{\cos x}$,

(*c*) $\int \frac{(3x^2-1)\,dx}{x(x-1)(x+1)} = \log(x^3 - x)$,

(*d*) $\int \sin^3 x\,dx = -\cos x + \frac{1}{3}\cos^3 x$

5. Assuming that

$$\log(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \ldots.$$

deduce the series

$$\log(1+y) = \log y + 2\left\{\left(\frac{1}{1+2y}\right) + \frac{1}{3}\left(\frac{1}{1+2y}\right)^3 + \ldots.\right\}$$

6. Show that the axis of the maximum parabola which can be inscribed in a given isosceles triangle is three-fourths of the altitude of the triangle.

7. Find the area included between the curve $a^2y = x^2(a+x)$ and the axis of x.

8. A body moves in a vertical circle of 4 feet diameter and under the action of gravity only: if the velocity at the highest point is 12 feet per second, what is the velocity at the lowest point?

9. Find the direction and magnitude of the least force which will draw a body up a rough inclined plane.

10. Find the moment of inertia of a sphere about a diameter.

SESSIONAL EXAMINATIONS,

1891.

FACULTY OF ARTS.

FACULTY OF ARTS.

SESSIONAL EXAMINATIONS, 1891.

CLASSICS.

FIRST YEAR.

GREEK.—HOMER, ILIAD, Bk. XXII.

THURSDAY, APRIL 2ND:—MORNING, 9 TO 12.

Examiner,..... A. J. EATON, M.A., PH.D

1. (*a*) Write a note on the character of the Homeric dialect. (*b*) What are the special merits for which Aristotle praises Homer? Name four essential characteristics of Homer's poetry, as enumerated by Matthew Arnold. (*c*) What do we know of the date of the composition of the Iliad and Odyssey? How have they been transmitted to us?

2. (*a*) Translate:—

Τὸν δὲ μέγ' ὀχθήσας προσέφη πόδας ὠκὺς Ἀχιλλεύς
"Ἐβλαψάς μ', Ἐκάεργε, θεῶν ὀλυώτατε πάντων,
Ἐνθάδε νῦν τρέψας ἀπὸ τείχεος· ἦ κ' ἔτι πολλοὶ
Γαῖαν ὀδὰξ εἷλον πρὶν Ἰλίον εἰσαφικέσθαι.
Νῦν δ' ἐμὲ μὲν μέγα κῦδος ἀφείλεο, τοὺς δ' ἐσάωσας
Ῥηϊδίως, ἐπεὶ οὔ τι τίσιν γ' ἐδείσας ὀπίσσω.
Ἦ σ' ἂν τισαίμην, εἴ μοι δύναμίς γε παρείη."

(*b*) State the uses of the Homeric article. How are τόν and τοίς used in the above passage? (*c*) ἦ κ' ἔτι: what is the force of each of these particles? (*d*) Explain the form of the derivative ἑκάεργε. (*e*) State the rule in full for construction ἐμὲ....κῦδος. (*f*) ἂν τισαίμην: carefully explain this form of condition.

3. (*a*) Give the equivalent Attic form of the following words, and show its relation to the Homeric and original form: ἄφειλεο, ἐών, πεδίοιο, πόληος, βίηφι, προτί, ἔπλετο, σειο.

(*b*) Derive, and explain any peculiarity of form: *δράκων*, *κορυθάιξ*, *Ἄϊδης* (Attic form?), *ἄμβροτον*. (*c*) Inflect *εἷς*, *δύο*; *ἀνήρ*, *χείρ*; *ἵστημι* in the imperf. indic. act. (*d*) Give the stem and principal parts of *ἐγείρω*, *ἐλαύνω*, *θνήσκω*, *καίω*, *λανθάνω*, *ὄλλυμι*.

4. Translate, and answer the questions at the end of each passage:

(1) Τὸν δ' αὖτε προσέειπε θεὰ γλαυκῶπις Ἀθήνη·
"Ὦ πάτερ ἀργικέραυνε κελαινεφὲς, οἷον ἔειπες.
Ἄνδρα θνητὸν ἐόντα, πάλαι πεπρωμένον αἶσῃ,
Αψ ἐθέλεις θανάτοιο δυσηχέος ἐξαναλῦσαι; 180
Ἐρδ'· ἀτὰρ οὔ τοι πάντες ἐπαινέομεν θεοὶ ἄλλοι."

πεπρωμένον: what is the stem of this verb, and what other forms are found from this stem?

(2) Ὡς δ' ὅτ' ἀεθλοφόροι περὶ τέρματα μώνυχες ἵπποι
Ῥίμφα μάλα τρωχώσι· τὸ δὲ μέγα κεῖται ἀέθλον,
Ἦ τρίπος ἠὲ γυνὴ, ἀνδρὸς κατατεθνηῶτος·
Ὡς τὼ τρὶς Πριάμοιο πόλιν περιδνηθήτην 165
Καρπαλίμοισι πόδεσσι. Θεοὶ δέ τε πάντες ὁρῶντο.

Distinguish between *ὥς* and *ὡς* (when does the latter take the accent?), *πέρι* and *περί*, *ἔπι* and *ἐπί*, *ἔστι* and *ἐστί*, *μύρια* and *μυρία*.

(3) Ὡς ἄρα μιν εἰπόντα τέλος θανάτοιο κάλυψεν,
Ψυχὴ δ' ἐκ ῥεθέων πταμένη Ἀϊδόσδε βεβήκει,
Ὃν πότμον γοόωσα, λιποῦσ' ἀνδροτῆτα καὶ ἥβην.
Τὸν καὶ τεθνηῶτα προσηύδα δῖος Ἀχιλλεύς·
"Τέθναθι· κῆρα δ' ἐγὼ τότε δέξομαι, ὁππότε κεν δὴ 365
Ζεὺς ἐθέλῃ τελέσαι ἠδ' ἀθάνατοι θεοὶ ἄλλοι."

Explain the case of *θανάτοιο*, *Ἄϊδοσδε*, and the construction *ὁππότε κεν δὴ ἐθέλῃ*.

5. Translate:—

Τὴν δὲ κατ' ὀφθαλμῶν ἐρεβεννὴ νὺξ ἐκάλυψεν,
Ἤριπε δ' ἐξοπίσω, ἀπὸ δὲ ψυχὴν ἐκάπυσσεν.
Τῆλε δ' ἀπὸ κρατὸς βάλε δέσματα σιγαλόεντα,
Ἄμπυκα κεκρύφαλόν τε ἰδὲ πλεκτὴν ἀναδέσμην
Κρήδεμνόν θ', ὅ ῥά οἱ δῶκε χρυσέη Ἀφροδίτη, 470
Ἤματι τῷ ὅτε μιν κορυθαίολος ἠγάγεθ' Ἕκτωρ
Ἐκ δόμου Ἠετίωνος, ἐπεὶ πόρε μύρια ἕδνα.
Ἀμφὶ δέ μιν γαλόῳ τε καὶ εἰνατέρες ἄλις ἔσταν,
Αἳ ἑ μετὰ σφίσιν εἶχον ἀτυζομένην ἀπολέσθαι.

6. (*a*) What is *tmesis?* Point out an example in the last passage. (*b*) *κρατός*: what is the Attic form in the nominative? Homeric? Give Homeric forms of the genitive. (*c*) Separate by hyphens the elements of the following derivatives, and give at least one word, in each case, in which the root and its meaning is clearly seen: *δέσματα, ἄμπυκα, κεκρύφαλον, κρήδεμνον, ἀεθλοφόροι.* (*d*) *ἕδνα*: what is the general usage of this word in Homer? In what other significations is it found? (*e*) *ἀπολεσθαι* (v. 474): explain the construction of this infinitive.

7. (*a*) Explain the terms *ἄρσις* and *θέσις* as used by the Greek writers. (*b*) What makes a Greek verse metrical? What is the unit of measure? (*c*) Describe the metre of the Homeric verse. What is *a spondaic verse?* (*d*) Write out lines 17, 19, 164, 364, marking the quantity *beneath* each syllable, dividing into feet, marking the caesural pause, and noting any peculiarities of metre.

INTERMEDIATE EXAMINATION.

GREEK.

THURSDAY, APRIL 2ND:—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE WEIR, LL.D.
A. J. EATON, M.A., PH.D.

I. PLATO, APOLOGY.

1. Translate:—

(A) Τελευτῶν οὖν ἐπὶ τοὺς χειροτέχνας ἦα· ἐμαυτῷ γὰρ ξυνῄδειν οὐδὲν ἐπισταμένῳ, ὡς ἔπος εἰπεῖν, τούτους δέ γ' ἤδειν ὅτι εὑρήσοιμι πολλὰ καὶ καλὰ ἐπισταμένους. καὶ τούτου μὲν οὐκ ἐψεύσθην, ἀλλ' ἠπίσταντο ἃ ἐγὼ οὐκ ἠπιστάμην. καὶ μου ταύτῃ σοφώτεροι ἦσαν. ἀλλ', ὦ ἄνδρες Ἀθηναῖοι, ταὐτόν μοι ἔδοξαν ἔχειν ἁμάρτημα, ὑπερ καὶ οἱ ποιηταί, καὶ οἱ ἀγαθοὶ δημιουργοί· διὰ τὸ τὴν τέχνην καλῶς ἐξεργάζεσθαι ἕκαστος ἠξίου καὶ τἄλλα τὰ μέγιστα σοφώτατος εἶναι, καὶ αὐτῶν αὐτη ἡ πλημμέλεια ἐκείνην τὴν σοφιαν ἀπέκρυπτεν· ὥστ' ἐμὲ ἐμαυτὸν ἀνερωτᾶν ὑπέρ τοῦ χρησμοῦ, πότερα δεξαίμην ἄν οὕτως ὥσπερ ἔχω ἔχειν, μήτε τι σοφὸς ὢν τὴν ἐκείνων σοφίαν, μήτε ἀμαθὴς τὴν ἀμαθίαν, ἢ ἀμφότερα ἃ ἐκεῖνοι ἔχουσιν ἔχειν. ἀπεκρινάμην οὖν ἐμαυτῷ καὶ τῷ χρησμῷ, ὅτι μοι λυσιτελοῖ ὥσπερ ἔχω ἔχειν.

(B) Ἴσως οὖν ὑμῖν καὶ ταυτὶ λέγων παραπλησίως δοκῶ λέγειν ὥσπερ περὶ τοῦ οἴκτου καὶ τῆς ἀντιβολήσεως, ἀπανθαδιζόμενος· τὸ δὲ οὐκ ἔστιν, ὦ Ἀθηναῖοι, τοιοῦτον, ἀλλὰ τοίονδε μᾶλλον. πέπεισμαι ἐγὼ ἑκὼν εἶναι μηδένα ἀδι-

κεῖν ἀνθρώπων, ἀλλὰ ὑμᾶς τοῦτο οὐ πείθω· ὀλίγον γὰρ χρόνον ἀλλήλοις δι-ει λεγμεθα· ἐπεί, ὡς ἐγᾦμαι, εἰ ἦν ὑμῖν νόμος, ὥσπερ καὶ ἄλλοις ἀνθρώποις, περὶ θανάτου μὴ μίαν ἡμέραν μόνον κρίνειν, ἀλλὰ πολλὰς, ἐπείσθητε ἂν· νῦν δ' οὐ ῥᾴδιον ἐν χρόνῳ ὀλίγῳ μεγάλας διαβολὰς ἀπολύεσθαι. πεπεισμένος δὴ ἐγὼ μηδένα ἀδικεῖν πολλοῦ δέω ἐμαυτόν γε ἀδικήσειν καὶ κατ' ἐμαυτοῦ ἐρεῖν αὐτός, ὡς ἀξιός εἰμί τοῦ κακοῦ, καὶ τιμήσεσθαι τοιούτου τινὸς ἐμαυτῷ. τί δείσας ; ἢ μὴ πάθω τοῦτο οὐ Μέλητός μοι τιμᾶται, ὃ φημι οὐκ εἰδέναι οὐτ' εἰ ἀγαθὸν οὐτ' εἰ κακόν ἐστιν ; ἀντὶ τούτου δὴ ἑλωμαι ὢν εὖ οἶδ' ὅτι κακῶν ὄντων τούτου τιμησάμενος ; πότερον δεσμοῦ ; καὶ τί με δεῖ ζῆν ἐν δεσμωτηρίῳ, δουλευ-οντα τῇ ἀεὶ καθισταμένῃ ἀρχῇ, τοῖς ἕνδεκα ; ἀλλὰ χρημάτων, καὶ δεδέσθα ἕως ἂν ἐκτίσω ; ἀλλὰ ταὐτόν μοί ἐστιν ὅπερ νῦν δὴ ἔλεγον· οὐ γὰρ ἔστι μοι χρήματα ὁπόθεν ἐκτίσω.

2. Ext. (A).—(*a*) *τελευτῶν* : explain form and construction. (*b*) *ἐ μαυτῳ ξυνῃδειν ἐπισταμένῳ* : what other construction is found with *σύνοιδα* ? (*c*) *ᾔδειν ὅτι ευρήσοιμι* : what would be the direct statement? Give the rule for the optative. In what tense is *εὑρήσοιμι* found? Write down the principal parts of this verb. (*d*) Give the derivation of *χειροτέχνας* and *πλημμέλει*. (*e*) Account for the case of *ἀμαθίαν*; the gender of *ἀμφότερα*.

3. Ext. (B).—(*a*) State in what mood and tense the following verbs are found, and give their principal parts: (1) *πέπεισμαι*, (2) *διειλέγμε-θα*, (3) *εἰδέναι*, (4) *ἑλωμαι*, (5) *ἐνεγκεῖν*. (*b*) Explain the construction *ἑλωμαι ὢν εὖ οἶδα ὅτι τῶν κακῶν ὄντων*.

II. Xenophon, Memorabilia, Book I.

4. Translate:—

Ἔφη δ' αὐτὸν ὁ κατήγορος καὶ τῶν ἐνδοξοτάτων ποιητῶν ἐκλεγόμενον τὰ πονηρότατα, καὶ τούτοις μαρτυρίοις χρώμενον, διδάσκειν τοὺς συνόντας κακούργους τε εἶναι καὶ τυραννικούς· Ἡσιόδου μὲν τό,

Ἔργον δ' οὐδὲν ὄνειδος, ἀεργίη δέ τ' ὄνειδος.

Τοῖτα δὴ λέγειν αὐτὸν, ὡς ὃ ποιητὴς κελεύει μηδενὸς ἔργου μήτε ἀδίκου μήτα αἰσχροῦ ἀπέχεσθαι, ἀλλὰ καὶ ταῦτα ποιεῖν ἐπὶ τῷ κέρδει. Σωκράτης δ' ἐπει δὴ ὁμολογήσαιτο τὸ μὲν ἐργάτην εἶναι ὠφέλιμόν τε ἀνθρώπῳ καὶ ἀγαθὸν εἶναι, τὸ δὲ ἀργὸν βλαβερόν τε καὶ κακὸν, καὶ τὸ μὲν ἐργάζεσθαῖ ἀγαθὸν, τὸ δὲ ἀργεῖν κακὸν, τοὺς μὲν ἀγαθόν τι ποιοῦντας ἐργάζεσθαί τε ἔφη καὶ ἐργάτας ἀγαθοὺς εἶναι· τοὺς δὲ κυβεύοντας ἤ τι ἄλλα πονηρὸν καὶ ἐπιζήμιον ποιοῦν-τας ἀργοὺς ἀπεκάλει. Ἐκ δὲ τούτων ὀρθῶς ἂν ἔχοι τό,

Ἔργον δ' οὐδὲν ὄνειδος, ἀεργίη δέ τ' ὄνειδος.

5. (*a*) Accurately explain the following forms, stating root or verb-stem, the formation of the present stem, and the principal parts: *χρώμενον* (for what contracted?), *ἀπεκάλει*, *ἔχοι*. (*b*) Explain the formation of the following compounds: *κακούγους*, *ἄργον* (cf. *ἀεργίη*). In what English word does the second element of these compounds occur?

6. Translate:—

Βουλεύσας γάρ ποτε καὶ τὸν βουλευτικὸν ὅρκον ὤμοσας, ἐν ᾧ ἦν κατὰ τοὺς νόμους βουλεύσειγ, ἐπιστάτης ἐν τῷ δήμῳ γενόμενος, ἐπιθυμήσαντος τοῦ δήμου παρὰ τοὺς νόμους ἐννέα στρατηγοὺς μιᾶ ψήφῳ τοὺς ἀμφὶ Θράσυλλον καὶ Ἐρασινδην ἀποκτεῖναι πάντας, οὐκ ἠθέλησεν ἐπιψηφίσαι, ὀργιζομένου μὲν αὐτῷ τοῦ δήμου, πολλῶν δὲ καὶ δυνατῶν ἀπειλούντων, ἀλλὰ περὶ πλείονος ἐποιήσατο εὐορκεῖν ἢ χαρίσασθαι τῷ δήμῳ παρὰ τὸ δίκαιον καὶ φυλάξασθαι τοὺς ἀπειλοῦντας.

7. Write a note on the historical allusions in the last passage. Define the term *ἐπιστάτης*.

III.

8. (*a*) Give the four forms of ordinary conditional sentences in Greek, and show what the protasis implies or states in each form.

(*b*) Translate the following sentences, and say to what class of conditional sentences they severally belong:

(1) *εἰ ἦν....ἐπεισθητε ἄν* (see Ext. B of Question) I.

(2) *κἂν μὲν τούτους ἀπελαύνω, οὗτοι ἐμὲ αὐτοὶ ἐξελῶσι.*

(3) *πολλὴ μεντ' ἄν με φιλοψυχία ἔχοι, εἰ οὕτως ἀλόγιστός εἰμι,*

(4) *Ὄντινα μὲν βασιλῆα καὶ ἔξοχον ἀνδρα κιχείη,*
Τὸν δ' αγανοῖς ἐπέεσσιν ἐρητύσασκε παραστάς·

(5) *ὅποι ἂν ἐλθω λέγοντος ἐμοῦ ἀκροασονται οἱ νέοι.*

9. (*a*) Give the general rules for indirect quotations after *ὅτι* and *ὡς*, and for direct questions. (*b*) What determines the use of *οὐ* and *μή* and their compounds? When is *μὴ οὐ* used? (*c*) State in respect of direct interrogative particles (1) those that imply nothing as to the answer expected, (2) those that imply an *affirmative* or *negative* answer.

10. Write upon *any three* of the following topics:

1. The Personality of Socrates.
2. The *δαιμόνιον* of Socrates.
3. The three prosecutors of Socrates.
4. The Constitution of the Athenian Court.
5. Definition of the terms *γράφη*, *δίκη*, *διωμοσία*, *ἀγων τίμητος*, *οἱ ἔνδικα*.

THIRD YEAR.

GREEK.—LYSIAS.—CONTRA ERATOSTHENEM.

WEDNESDAY, APRIL 8TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate: –

(A) Ἐν τοιούτῳ δ' ὄντι μοι κινδυνεύειν ἐδόκει, ὡς τοῦ γε ἀποθανεῖν ὑπάρχοντος ἤδη. καλέσας δὲ Δάμνιππον λέγω πρὸς αὐτὸν τάδε, "ἐπιτήδειος μέν μοι τυγχάνεις ὤν, ἥκω δ' εἰς τὴν σὴν οἰκίαν, ἀδικῶ δ' οὐδέν, χρημάτων δ' ἕνεκα ἀπόλλυμαι. σὺ οὖν ταῦτα πάσχοντί μοι πρόθυμον παράσχου τὴν σεαυτοῦ δύναμιν εἰς τὴν ἐμὴν σωτηρίαν." ὁ δ' ὑπέσχετο ταῦτα ποιήσειν. ἐδόκει δ' αὐτῷ βέλτιον εἶναι πρὸς Θέογνιν μνησθῆναι· ἡγεῖτο γὰρ ἅπαν ποιήσειν αὐτόν, εἴ τις ἀργύριον διδοίη. ἐκείνου δὲ διαλεγομένου Θεόγνιδι (ἔμπειρος γὰρ ὢν ἐτύγχανον τῆς οἰκίας, καὶ ἤδειν ὅτι ἀμφίθυρος εἴη) ἐδόκει μοι ταύτῃ πειρᾶσθαι σωθῆναι, ἐνθυμουμένῳ ὅτι, ἐὰν μὲν λάθω, σωθήσομαι, ἐὰν δὲ ληφθῶ, ἡγούμην εἰ μέν Θέογνις εἴη πεπεισμένος ὑπὸ τοῦ Δαμνίππου χρήματα λαβεῖν, οὐδὲν ἧττον ἀφεθήσεσθαι, εἰ δὲ μή, ὁμοίως ἀποθανεῖσθαι. Ταῦτα διανοηθεὶς ἐφευγον, ἐκείνων ἐπὶ τῇ αὐλείῳ θύρᾳ τὴν φυλακὴν ποιουμένων· τριῶν δὲ θυρῶν οὐσῶν, ἃς ἔδει με διελθεῖν, ἅπασαι ἀνεῳγμέναι ἔτυχον.

(B) μισθωσάμενοι δὲ πάντας ἀνθρώπους ἐπ' ὀλέθρῳ τῆς πόλεως, καὶ πόλεις ἐπάγοντες, καὶ τελευτῶντες Λακεδαιμονίους καὶ τῶν συμμάχων ὁπόσους ἐδύναντο πεῖσαι, οὐ διαλλάξαι ἀλλ' ἀπολέσαι παρεσκευάζοντο τὴν πόλιν εἰ μὴ δι' ἄνδρας ἀγαθούς, οἷς ὑμεῖς δηλώσατε παρὰ τῶν ἐχθρῶν δίκην λαβόντες, ὅτι καὶ ἐκείνοις χάριν ἀποδώσετε. ταῦτα δὲ ἐπίστασθε μὲν καὶ αὐτοί, καὶ οἶδ' ὅτι οὐ δεῖ μάρτυρας παρασχέσθαι· ὅμως δέ· ἐγώ τε γὰρ δέομαι ἀναπαύσασθαι, ὑμῶν τ' ἐνίοις ἥδιον ὡς πλείστων τοὺς λόγους αὐτους ἀκούειν.

(C) Περὶ μὲν τοίνυν Θηραμένους ἱκανά μοί ἐστι τὰ κατηγορημένα. ἥκει δ ὑμῖν ἐκεῖνος ὁ καιρός ἐν ᾧ δεῖ συγγνώμην καὶ ἔλεον μὴ εἶναι ἐν ταῖς ὑμετέραις' γνώμαις, ἀλλὰ παρὰ Ἐρατοσθένους καὶ τῶν τουτοὶ συναρχόντων δίκην λαβεῖν, μηδὲ μαχομένους μὲν κρείττους εἶναι τῶν πολεμίων, ψηφιζομένους δὲ ἥττους τῶν ἐχθρῶν· μηδ' ὧν φασι μέλλειν πράξειν πλείω χάριν αὐτοῖς ἴστε, ἢ ὧν ἐποίησαν ὀργίζεσθε· μηδ' ἀποῦσι μὲν τοῖς τριάκοντα ἐπιβουλεύετε, παρόντας δ ἀφῆτε· μηδὲ τῆς τύχης, ἣ τούτους παρέδωκε τῇ πόλει, κάκιον ὑμῖν αὐτοις βοηθήσητε.

(D) ἀλλὰ γὰρ εἰ τὰ χρήματα τὰ φανερὰ δημεύσετε, καλῶς ἂν ἔχοι τῇ πόλει ἃς οὗτοι πολλὰ εἰλήφασιν, ἢ τοῖς ἰδιώταις, ὧν τὰς οἰκίας ἐξεπόρθησαν; ἐπειδὴ τοίνυν πάντα ποιοῦντες δίκην παρ' αὐτῶν οὐκ ἂν δύναισθε λαβεῖν, πῶς οὐκ αἰσχρὸν ὑμῖν καὶ ἡντινοῦν ἀπολιπεῖν, ἡντινά τις βούλοιτο παρὰ τούτων λαμβά-

νειν ; πᾶν δ' ἄν μοι δοκεῖ τολμῆσαι, ὅστις νυνὶ οὐχ ἑτέρων ὄντων τῶν δικαστῶν ἀλλ' τῶν κακῶς πεπονθότων, ἥκει ἀπολογησόμενος πρὸς αὐτοὺς τοὺς μάρτυρας τῆς τούτου πονηρίας· τοσοῦτον ἢ ὑμῶν καταπεφρόνηκεν ἢ ἑτέροις πεπίστευκεν.

2. Ext. (A).—(*a*) *ἀμφίθυρος. τριῶν δὲ θυρῶν οὐσῶν* :—explain. (*b*) *ὡς τοῦ γε ἀποθανεῖν ὑπάρχοντος* :—Show the construction.

3. Ext. (B).—(*a*) *καὶ τελευτῶντες Λακεδαιμονίους* :—Show the construction. (*b*) *ἀλλ' ἀπολέσαι * * * εἰ μὴ δι' ἄνδρας ἀγαθούς* :—Supply the ellipses here. (*c*) *χάριν ἀποδώσετε, χάριν ἴστε* :—Turn into Latin, severally.

4. Extt. (C) and (D).—(*a*) Parse and explain the forms *κρείττους, ἥττους, πλείω.* (*b*) *τῆς τύχης* :—What use of the genitive? (*c*) *ἡντινοῦν, ἡντινα δίκην* :—Express in Latin. (*d*) *ἂν τολμῆσαι* :—What form of the finite verb is here represented? (*e*) *οὐχ ἑτέρων ὄντων τῶν δικαστῶν* :—Point out the subject and predicate, and give the rule.

5. Parse the following words, giving the principal parts of the verbs :—*κατέστησαν, ἐξιοῦσι, τἀδε᾽ φοῦ, ὑπέσχετο, ληφθῶ, προὔθεντο, πευσόμενον, ἐρέσθαι* (or *ἔρεσθαι*?) *υἱεῖς, σωτήρια, σωτηρία, ᾑρέθη, ἐκτῶντο, εἴησαν δεδωκότες.*

6. Give as accurately as you can the meaning with the derivation of :—*δικασταί, συκοφάνται, ἐφόδια, χορηγίας, ἑλικτῆρας, μετοικοῦντας, ἀτίμους, βάσανον, διαψήφισιν, εἰσαγγελία.*

7. Explain briefly the syntax of :—(*a*) *ἀφηρεθητε τὰ ὅπλα. (b) ἐν τῷ θαρραλέῳ ὄντες. (c) ὀφθήσεσθε τῶν αὐτῶν ἔργων ἐπιθυμηταὶ τούτοις ὄντες. (d) ἀλλὰ καὶ τῶν συνερούντων αὐτοῖς ἄξιον θαυμάζειν. (e) καὶ μὴν οὐδὲ τοῦτο εἰκὸς αὐτῷ πιστεύειν.*

8. Show the force of the following Particles, or combinations of Particles, giving the derivation when you can :—(*a*) *καὶ μήν. γάρ. ἀλλὰ γάρ. ὥσπερ. ὡς. γὲ. οὐχ ὁμοίως ὥσπερ. μέντοι. καὶ μὲν δή.*

9. State the import of the propositions in the following extracts :—(*a*) *οἱ ἐπὶ ξένης. (b) οἱ ἐξ ἄστεος. (c) ἐπὶ τῇ τῶν πολιτῶν βλάβῃ. (d) ἐπὶ τῶν τετρακοσίων. (e) οὐ γὰρ ἐξῆν ἡμῖν παρ' αὐτοῖς εἶναι ὥστ' ἐπὶ τούτοις ἐστι πάντα τἀγαθὰ περὶ αὐτῶν λέγειν.*

10. Write a short historical account of the public events at Athens that are referred to in this oration.

B.A. ORDINARY EXAMINATION.

TUESDAY, APRIL 14TH :—MORNING, 9 TO 12.

GREEK.—{AESCHINES.—CONTRA CTESIPHONTEM. AESCHYLUS—PROMETHEUS VINCTUS.

Examiners,..... {REV. GEORGE CORNISH, LL.D. REV. GEORGE WEIR, LL.D.

1. Translate :—

(A) *καὶ εἰ μὴ πρῶτον μὲν θεῶν τις ἐσωσε τὸ στρατόπεδον, ἔπειθ' οἱ στρατιῶται οἱ ὑμέτεροι καὶ πεζοὶ καὶ ἱππεῖς ἄνδρες ἀγαθοὶ ἐγένοντο καὶ παρὰ τὸν ἱππόδρομον τὸν ἐν Ταμύναις ἐκ παρατάξεως μάχῃ κρατήσαντες ἀφεῖσαν ὑποσπόνδους τοὺς πολεμίους, ἐκινδύνευσεν ἂν ἡ πόλις αἴσχιστα παθεῖν· οὐ γὰρ τὸ δυστυχῆσαι κατὰ πόλεμον μέγιστόν ἐστι κακὸν, ἀλλ' ὅταν τις πρὸς ἀνταγωνιστὰς ἀναξίους αὐτοῦ διακινδυνεύων ἀποτύχῃ, διπλασίαν εἰκὸς εἶναι τὴν συμφοράν. ἀλλ' ὅμως ὑμεῖς τοιαῦτα πεπονθότες πάλιν διελύσασθε πρὸς αὐτούς. τυχὼν δὲ παρ' ὑμῶν συγγνώμης Καλλίας ὁ Χαλκιδεὺς μικρὸν διαλιπὼν χρόνον πάλιν ἦκε φερόμενος εἰς τὴν ἑαυτοῦ φύσιν. Εὐβοϊκὸν μὲν τῷ λόγῳ συνέδριον εἰς Χαλκίδα συνάγων, ἰσχυρὰν δὲ τὴν Εὔβοιαν ἐφ' ὑμᾶς ἔργῳ παρασκευάζων, ἐξαίρετον δ' αὑτῷ τυραννίδα περιποιούμενος. καὶ ταύτης ἐλπίζων συναγωνιστὴν Φίλιππον λήψεσθαι ἀπῆλθεν εἰς Μακεδονίαν καὶ περιῇει μετὰ Φιλίππου, καὶ τῶν ἑταίρων εἷς ὠνομάζετο.*

2. (*a*) In the above extract explain :—(1) Any conditional clause, giving the names of its parts and the class to which it belongs. (2) *φερόμενος* and elsewhere *φέρων* :—Explain this idiom. (*b*) Parse, giving principal parts of verbs :—*ἀφεῖσαν, ὑποσπόνδους, παθεῖν, ἀποτύχῃ* (why in this mood?), *διαλιπών* (how construed?), *περιῇει, πλείους.*

3. (B) *Ἐγὼ τὸν μὲν βίον τὸν Δημοσθένους ἐξετάζειν μακροτέρου λόγου ἔργον ἡγοῦμαι εἶναι. τί γὰρ δεῖ νῦν ταῦτα λέγειν, ἢ τὰ περὶ τὴν τοῦ τραύματος γραφὴν αὐτῷ συμβεβηκότα, ὅτ' ἐγράψατο εἰς Ἄρειον πάγον Δημομέλην τὸν Παιανιέα ἀνεψιὸν ὄντα ἑαυτῷ καὶ τὴν τῆς κεφαλῆς ἐπιτομήν· ἢ τὰ περὶ τὴν Κηφισοδότου στρατηγίαν καὶ τὸν τῶν νεῶν ἔκπλουν τὸν εἰς Ἑλλησπόντον, ὅτε εἷς ὢν τριηράρχων Δημοσθένης καὶ περιάγων τὸν στρατηγὸν ἐπὶ τῆς νεὼς καὶ συσσιτῶν καὶ συνθύων καὶ συσπένδων, καὶ τούτων ἀξιωθεὶς διὰ τὸ πατρικὸς αὐτῷ φίλος εἶναι, οὐκ ὤκνησεν ἀπ' εἰσαγγελίας αὐτοῦ κρινομένου περὶ θανάτου κατήγορος γενέσθαι· καὶ ταῦτα ἤδη τὰ περὶ Μειδίαν καὶ τοὺς κονδύλους, οὓς ἔλαβεν ἐν τῇ ὀρχήστρᾳ χορηγὸς ὤν, καὶ ὡς ἀπέδοτο τριάκοντα μνῶν ἅμα τήν τε εἰς αὐτὸν ὕβριν καὶ τὴν τοῦ δήμου καταχειροτονίαν, ἣν ἐν Διονύσου κατεχειροτόνησε Μειδίου.*

4. (*a*) Explain the personal references in Ext. (B). (*b*) Describe briefly the constitution and functions of:—(1) *ἡ βουλὴ οἱ πεντακοσίοι.* (2) *ἡ βουλὴ ἡ ἐν Ἀρείῳ πάγῳ.* (3) *ἡ ἐκκλησία.* (*c*) Write explanatory notes on any six of the following :—(1) *πρόεδροι.* (2) *φυλὴ πρυτα-*

νεύουσα. (3) *πρυτανεία.* (4) *πρυτάνεις.* (5) *εἰσαγγελία.* (6) *εὐθύνη.* (7) *οἱ θεσμοθέται.* (8) *ἡγεμονία δικαστηρίων.* (9) *τριήραρχοι.* (10) *τὰ θεωρικά.* (11) *ἀντιγραφεύς.* (12) *τειχοποιός.* (13) *τὰ Διονύσια τὰ ἐν ἀστει.* (14) *πυλαγόραι.* (15) *ἱερομνήμονες.*

5. *τοῦτ' ἔπραξαν ἕκτῃ φθίνοντος τοῦ Ἐλαφηβολιῶνος μηνός*:—(1) In what two ways may this be expressed? (2) Give the divisions of the Attic month and the manner of dating, with an example under each division.

6. (C) *Τοιγάρτοι τί τῶν ἀνελπίστων καὶ ἀπροσδοκήτων ἐφ' ἡμῶν οὐ γέγονεν; οὐ γὰρ βίον γε ἡμεῖς ἀνθρώπινον βεβιώκαμεν, ἀλλ' εἰς παροδοξολογίαν τοῖς ἐσομένοις μεθ' ἡμᾶς ἐφυμεν. οὐχ ὁ μὲν τῶν Περσῶν βασιλεὺς, ὁ τὸν Ἄθω διορύξας, ὁ τὸν Ἑλλήσποντον ζεύξας, ὁ γῆν καὶ ὕδωρ τοὺς Ἕλληνας αἰτῶν, ὁ τολμῶν ἐν ταῖς ἐπιστολαῖς γράφειν, ὅτι δισπότης ἐστὶν ἁπάντων ἀνθρώπων ἀφ' ἡλίου ἀνιόντος μέχρι δυομένου, νῦν οὐ περὶ τοῦ κύριος ἑτέρων εἶναι διαγωνίζεται ἀλλ' ἤδη περὶ τῆς τοῦ σώματος σωτηρίας; καὶ τούς αὐτοὺς ὁρῶμεν της τε δόξης ταύτης καὶ τῆς ἐπί τὸν Πέρσην ἡγεμονίας ἠξιωμένους, οἱ καὶ τὸ ἐν Δελφοὶς ἱερὸν ἠλευθέρωσαν; Θῆβαι δὲ Θῆβαι πόλις ἀστυγείτων, μεθ' ἡμέραν μίαν ἐκ μέσης τῆς Ἑλλάδος ἀνήρπασται, εἰ καὶ δικαίως, περὶ τῶν ὅλων οὐκ ὀρθῶς βουλευσάμενοι, ἀλλὰ τήν γε θεοβλάβειαν καὶ τὴν ἀφροσύνην οὐκ ἀνθρωπίνης ἀλλὰ δαιμονίως κτησάμενοι.*

Explain briefly the historical references of Ext. (C).

7. Translate Prometheus Vinctus, adding an explanatory note where you deem necessary:—

(*a*) ΠΡ. *ἡ μὴν ἔτι Ζεὺς, καίπερ αὐθάδη φρονῶν,*
ἔσται ταπεινὸς, τοῖον ἐξαρτύεται
γάμον γαμεῖν, ὃς αὐτὸν ἐκ τυραννίδος
θρόνων τ' ἄϊστον ἐκβαλεῖ· πατρὸς δ' ἀρὰ
Κρόνου τότ' ἤδη παντελῶς κρανθήσεται,
ἣν ἐκπίτνων ἠρᾶτο δηναιῶν θρόνων.
τοιῶνδε μόχθων ἐκτροπὴν οὐδεὶς θεῶν
δύναιτ' ἂν αὐτῷ πλὴν ἐμοῦ δεῖξαι σαφῶς.
ἐγὼ τάδ' οἶδα χῳ τρὸπῳ. πρός ταῦτά νυν
θαρσῶν καθήσθω τοῖς πεδαρσίοις κτύποις
πιστὸς, τινάσσων τ' ἐν χεροῖν πύρπνουν βέλος.
οὐδὲν γὰρ αὐτῷ ταῦτ' ἐπαρκέσει τὸ μὴ οὐ
πεσεῖν ἀτίμως πτώματ' οὐκ ἀνασχετά.

(*b*) *ὁ δ' ἔς τε Πυθὼ κἀπὶ Δωδώνης πυκνοὺς*
θεοπρόπους ἴαλλεν, ὡς μάθοι τὶ χρὴ
δρῶντ' ἢ λέγοντα δαίμοσιν πράσσειν φίλα.

ἦκον δ' ἀναγγέλλοντες αἰολοστόμους
χρησμους ἀσήμους δυσκρίτως τ' εἰρημένους.
τέλος δ' ἐναργὴς βάξις ἦλθεν Ἰνάχῳ
σαφῶς ἐπισκήπτουσα καὶ μύθουμένη
ἐξω δόμων τε καὶ πάτρας ὠθεῖν ἐμὲ,
ἄφετον ἀλᾶσθαι γῆς ἐπ' ἐσχατοις ὅροις·
καὶ μὴ θέλοι, πυρωπὸν ἐκ Διὸς μολεῖν
κεραυνόν, ὃς πᾶν ἐξαϊστώσοι γένος.

(*c*) τοιαῦτα μὲν δὴ ταῦτ'· ἐνερθε δὲ χθονὸς
κεκρυμμέν' ἀνθρώποισιν ὠφελήματα,
χαλκὸν, σίδηρον, ἄργυρον, χρυσόν τε τίς
ῥήσειεν ἂν πάροιθεν ἐξευρεῖν ἐμοῦ ;
οὐδεὶς, σάφ' οἶδα, μὴ μάτην ὀλῦσαι θέλων.
βραχεῖ δὲ μίθῳ πάντα συλλήβδην μάθε,
πᾶσαι τέχναι βροτοῖσιν ἐκ Προμηθέως.

8. Explain the dialect of the following, severally, and give the commonly received Attic equivalents of them :—*πεδαρσίοις, μᾶσσον, ἅρμοι, δᾶ, πωλεύμεναι, ἀχέτας, εἰβομένα.* Parse the following :—*βᾶσαι, φύλαξαι, προσῆξε, ἐδωρήσω, θράξαι, παρεξίασι, λέλακε, προσέπτα, ἐκτακείη, οἰκτιεῖς*— (Explain the formation of the last).

9. (*a*) Write down the scale of the *Anapaestic Dimeter Acatalectic.* (*b*) With what vowels can elision take place? Supply the elided vowels in *βούλευ', ἥδοι', τιν', αὐλῶν'.* (*c*) Resolve the following crases : —*χἠ, χὦσα, κεἰς, μἤχοιμι, οὐκ, οὐμοί.*

FIRST YEAR.—LATIN.

FRIDAY, APRIL 3RD :—MORNING, 9 TO 12.

Examiner, ...A. J. EATON, PH.D.

(A) VIRGIL, GEORGICS, Bk. I.

1. (*a*) To what class of poems do the Georgics belong? Name the earliest poem of this class, and three famous ones written in the Golden age of Rome. Which of these exerted the strongest influence on the thought and style of the Georgics? (*b*) Give an outline of Virgil's Life.

2. (*a*) Translate :—

Vos, o clarissima mundi
Lumina, labentem caelo quae ducitis annum,
Liber et alma Ceres, vestro si munere tellus
Chaoniam pingui glandem mutavit arista,

Poculaque inventis Acheloïa miscuit uvis ;
Et vos, agrestum praesentia numina, Fauni,
Ferte simul Faunique pedem Dryadesque puellae :
Munera vestra cano .

(*b*) What gods are here invoked in order ? and why? (*c*) *alma :* what is the *figurative* meaning of this adjective, and its general usage? the *literal* meaning? How does it seem to be used here ? (*d*) Comment on the epithets *Chaoniam, Acheloia.* (*e*) Give the grammatical construction of *caelo, arista.* Principal parts of *cano.*

3. (*a*) Translate :—

Frigidus agricolam si quando continet imber,
Multa, forent quae mox caelo properanda sereno,
Maturare datur ; durum procudit arator
Vomeris obtusi dentem ; cavat arbore lintres ;
Aut pecori signum, aut numeros impressit acervis.
Exacuunt alii vallos furcasque bicornes,
Atque Amerina parant lentae retinacula viti.

(*b*) Distinguish, in meaning, between *maturare* and *properare.* Carefully explain the force of the subjunctive *forent properanda.*

(*c*) Derivation of *retinacula ?* In what other meaning is it found in this poem ?

(*d*) Principal parts of *procudit, obtusi, impressi* (marking all *long* vowels).

4. (*a*) Translate :—

Saepe ego, quum flavis messorem induceret arvis
Agricola, et fragili iam stringeret hordea culmo,
Omnia ventorum concurrere proelia vidi ;
Quae gravidam late segetem ab radicibus imis
Sublime expulsam eruerent : ita turbine nigro 320
Ferret hiems culmumque levem stipulasque volantes.
Saepe etiam immensum caelo venit agmen aquarum,
Et foedam glomerant tempestatem imbribus atris
Collectae ex alto nubes ; ruit arduus aether,
Et pluvia ingenti sata laeta boumque labores
Diluit ; implentur fossae, et cava flumina crescunt
Cum sonitu, fervetque fretis spirantibus aequor.

(*b*) Why are *eruerent* and *ferret* in the subjunctive imperfect? (*c*) Remark on the force of the words *agmen, foedam, imbribus, aether* in this connection. (*d*) How may *ex alto* be rendered? (*e*) Scan lines 320, 321, 322, marking *beneath* the line, the quantity of each syllable dividing into

feet, marking the caesural pause, and explaining any peculiarities. Remark also on the accommodation of sound to sense in one or more of these lines.

5. [*The extracts that follow are not to be translated.*]

(1) Apparet liquido sublimis in aëre Nisus,
Et pro purpureo poenas dat Scylla capillo.

(2) Ter sunt conati imponere Pelio Ossam
Scilicet, atque Ossae frondosum involvere Olympum:
Ter pater exstructos disiecit fulmine montes.

(3) Ergo inter sese paribus concurrere telis
Romanas acies iterum videre Philippi ;
Nec fuit indignum superis, bis sanguine nostro
Emathiam et latos Haemi pinguescere campos.
Scilicet et tempus veniet, quum finibus illis
Agricola, incurvo terram molitus aratro,
Exesa inveniet scabra robigine pila,
Aut gravibus rastris galeas pulsabit inanes,
Grandiaque effossis mirabitur ossa sepulcris.

(*a*) Describe the geographical position of Pelion, Ossa, Olympus Philippi, Emathia, Haemus. (*b*) To what two battles is allusion made in vss. 489 to 490? Write a brief note on each event. (*c*) Scan the line, *Ter... Ossam*, and account for peculiarities. (*d*) Explain the meaning of *paribus*. What two constructions may *iterum* have (v. 490), and what may be said in favour of each? (*e*) Explain the allusion to *Nisus* and *Scylla*.

(B) Latin Composition.

1. Translate into English:—

Obsidibus acceptis exercitum reducit ad mare, naves in venit refect as His deductis, quod et captivorum magnum numerum habebat, et nonnullae tempestate deperierant naves, duobus commeatibus exercitum *reportare* instituit. Ac sic accidit uti ex tanto navium numero, tot navigationibus, neque hoc neque *superiore anno* ulla omnino navis quae milites *portaret desideraretur*, at ex iis quae inanes ex continenti ad eum remitterentur, prioris commeatus expositis militibus, et quas postea Labienus *faciendas* curaverat numero LX, perpaucae locum caperent, reliquae fere omnes reicerentur.

2. (*a*) State fully the principles of Syntax, that are illustrated by words or phrases *in italics*. *b*) Write out the first two sentences, marking all *naturally long* vowels.

3. Translate into Latin:—

As the result of our inquiries, we found that the island is of a triangular shape, with a perimeter of seventeen hundred miles, the side which trends to the north being five hundred miles in length, and that which looks southward, over an open sea, about seven hundred and fifty miles. The population is vast, the tribes naming themselves after the places from which they are traditionally said to have sprung. Houses are not very frequent, as the people are free rovers. Towns with them mean natural fortifications in the depths of intricate forests, strengthened, as a defence against inroads, by mounds and moats. Most districts are shut out from the use of the sea, and at the same time protected from the violence of invaders. One corner, which produces tin and iron in small quantities—the only money consists of iron nails—is visited by vessels, and possesses a naval station.

FIRST YEAR.

HISTORY OF ROME (*Mommsen's Abridged*).

FRIDAY, APRIL 3RD:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, PH.D.

[*Answer any ten of the following questions.*]

1. Describe, geographically, the Italian peninsula.

2. To what family of nations did the Italian people belong? Into what distinct races were they divided, and which of these was the most important?

3. Give an account of the early Latin settlements, and the origin of Rome.

4. What was the basis of the Roman constitution? Describe the early Roman family. What was the original meaning of the terms *familia*, *patronus*, *patricii*, *curia*, *miles*, *tribus*, *populus*, *contiones*, *rogatio*?

5. (*a*) To what period can the origin of the Senate be ascribed? Describe its early constitution. (*b*) Give an account of the rise of the Plebs.

6. Name the chief Greek colonies, and give their geographical position. At about what time were the earliest of these formed? What two Greek cities exercised the greatest influence upon Italy?

7. Describe three distinct movements which agitated the community at the close of the regal period. What was the natural outcome of the first?

8. In what respects did the power of the consuls differ from that of the king? When and by what assembly were the first consuls elected? How were the prerogatives of the senate affected by the change in the constitution?

9. Show how the Laws of the Twelve Tables originated, and in what the political significance of this code lay?

10. (*a*) Describe the influences which led to the ruin of the small farmers. (*b*) State the circumstances of the first secession. (*c*) Name the chief characteristics of the tribunate.

11. Describe the character of the Celts,—their migrations, attack and capture of Rome in 390 B. C.

12. Briefly summarize the steps by which Rome became mistress of Italy.

13. (*a*) Narrate the causes which brought Pyrrhus to Italy. (*b*) Give an account (with date) of his first battle with the Romans.

14. (*a*) To what did Carthage owe its sudden rise? (*b*) Describe the extent of its empire and its form of government. (*c*) Draw a comparison between Rome and Carthage.

15. (*a*) State the cause of the rupture between Rome and Carthage. (*b*) Under what circumstances was the first Roman fleet built? Give an account of the progress and close of the first Punic War (with leading dates).

INTERMEDIATE EXAMINATION.

LATIN.—HORACE AND SALLUST.

FRIDAY, APRIL 3RD :—MORNING, 9 TO 12.

Examiners,..... ..... { REV. GEORGE WEIR, LL.D. / A. J. EATON, PH.D.

1. Translate :—

(A) Denique sit finis quaerendi, cumque habeas plus,
pauperiem metuas minus, et finire laborem
incipias, parto quod avebas, ne facias quod
Vmmidius quidam. Non longa est fabula : dives,
ut metiretur nummos, ita sordidus, ut se
non unquam servo melius vestiret, ad usque
supremum tempus, ne se penuria victus
opprimeret metuebat. At hunc liberta securi
divisit medium, fortissima Tyndaridarum.

(B) Perditur haec inter misero lux non sine votis :
O rus, quando ego te aspiciam ? quandoque licebit
nunc veterum libris, nunc somno et inertibus horis
ducere sollicitae iucunda oblivia vitae ?
O quando faba Pythagorae cognata simulque
uncta satis pingui ponentur holuscula lardo ?
O noctes cenaeque deum ! quibus ipse meique
ante larem proprium vescor vernasque procacis
pasco libatis dapibus. Prout cuique libido est,
siccat inaequalis calices conviva, solutus
legibus insanis, seu quis capit acria fortis
pocula, seu modicis uvescit laetius. Ergo
sermo oritur, non de villis domibusve alienis,
nec male necne Lepos saltet ; sed quod magis ad nos
pertinet et nescire malum est agitamus : utrumne
divitiis homines an sint virtute beati ;
quidve ad amicitias, usus rectumne, trahat nos ;
et quae sit natura boni, summumque quid eius.

(C) Ceterum facies totius negoti varia incerta, foeda atque miserabilis: dispersi a suis pars cedere alii insequi, neque signa neque ordines observare, ubi quemque periculum ceperat iib resistere ac propulsare ; arma tela, equi viri, hostes atque cives permixti mi'hionsilio nei o queimperio agi, fors omnia regere. Itaque multum diei processerat, cum etiamtum eventus in incerto erat. Denique omnibus labore et aestu languidis Metellus ubi vide Numidas minus instare, paulatim milites in unum conducit, ordines restitui et cohortis legionarias quattuor advorsum pedites hostium conlocat. Eorum magna pars superioribus locis fessa consederat. Simul orare et hortari milites ne deficerent neu paterentur hostis fugientis vincere : neque illis castra esse neque munimentum ullum, quo cedentes tenderent : in armis omnia sita.

2. State clearly the principles of Syntax that explain the following forms : (*a*) in regard to mood and tense, *sit, habeas, facias, metiretur ;* (*b*) in regard to case, *parto* (give also principal parts), *victus, securi, libris, quibus* (Ext. B.), *deum.*

3. (*a*) *perditur :* what is the usual substitute for this passive form ? (*b*) Write out the passage (in C) *ne deficerent.....omnia sita* in direct narration. (*c*) What peculiarity of style is especially noticeable in Ext. C ? Illustrate and explain. (*d*) Scan the second, fourth, and ninth lines of Ext. B.

4. Write explanatory notes on the following expressions : (1) fortissima Tyndaridarum, (2) faba Pythagorae cognata, (3) Lepos, (4) quidve ad amicitas usus rectumne, trahat nos.

5. (*a*) Give the meaning and derivation of *anceps, tramites, fastidium, mantica.* (*b*) Distinguish between *referat* and *referat, āret* and *aret* (see 7 [5]), *dēum* and *deum* (Ext. B). (*c*) What construction do *prope, propius* and *proximus* take after them? (*d*) When are the causal conjunctions *quod* and *quia* followed (1) by the indicative, (2) by the subjunctive.

6. (*a*) Name the divisions of Northern Africa at the time of the Jugurthine War. Where was the Catabathmus, and why so called? (*b*) Give a short account of the life of Sallust. Give also the leading characteristics of his style? On what Greek historian's style is Sallust's modelled? (*c*) Where was Horace born? What references does he make to the place of his birth in these satires? (*d*) What name did Horace himself give to this form of composition? Give the origin and original meaning of the term *satura.*

7. Translate, and discuss form or syntax of italicized words :

(1) Vestra beneficia *mihi* erepta sunt, Patres Conscripti: vos in iniuria *mea* despecti estis. (By whom were these words spoken?)

(2) timebat iram *senati*, ni *paruisset* legatis.

(3) neque diutius Numidae resistere *quivissent*, ni pedites cum equitibus permixti magnam cladem in congressu *facerent.* (Why not *fecissent?*)

(4) Sed postquam Roma egressus est, fertur saepe eo tacitus respiciens postremo dixisse, *urbem venalem et mature perituram, si emptorem invenerit!*

(5) Vel dic, quid *referat* intra
naturae *finis viventi*, iugera centum an
mille *aret?* At suave est ex magno *tollere* acervo

8. (*a*) Translate :—

Numquam ego ratus sum fore, uti rex maxumus in hac terra et omnium quos novi privato homini gratiam deberem. Et mehercule, Sulla, ante te cognitum multis orantibus, aliis ultro egomet opem tuli, nullius indigui. Id inminutum, quod ceteri dolere solent, ego laetor: fuerit mihi eguisse aliquando tuae amicitiae, qua apud animum meum nihil carius habeo. Id adeo experiri licet: arma viros pecuniam, postremo quicquid animo lubet, sume utere, et quoad vives, numquam tibi redditam gratiam putaveris: semper apud me integra erit: denique nihil me sciente frustra voles. Nam ut ego aestumo, regem armis quam munificentia vinci minus flagitiosum est.

(*b*) By whom and under what circumstances were these words spoken?.

INTERMEDIATE EXAMINATION.

LATIN PROSE COMPOSITION.

WEDNESDAY, APRIL 15TH :—MORNING.

Examiners,..... } REV. GEORGE WEIR, LL.D.
A. J. EATON, M.A., PH.D.

(A) News of our plans must have been transmitted by the merchants; for when, about three o'clock in the afternoon, we made land at a place not at all well fitted for disembarkation, we found the native forces displayed on a narrow line of cliffs, within spear's cast of the water; and the first few vessels were greeted as they approached with a bold flight of missiles. However, the ships of war were rapidly brought up with the sweeps, and their unfamiliar appearance caused much alarm. When orders were given to dislodge the foe by a simultaneous discharge of weapons of every arm unused to warfare of this description, they drew back in a body. The greater part of them afterward fled in confusion, and dispersed to whatever quarter they severally felt inclined. A few formed themselves into a body, took up a position on one of the neighbouring heights, and defied all our efforts to dislodge them, hurling back the darts discharged at them from a distance.

(B) Diomede having gone to the Trojan War with the Aetolians, whose king he was, signalized himself so greatly as to be ranked among the principal heroes, and accounted the bravest of the Greeks, next to Achilles and Ajax. Homer says, that being favoured by Minerva, and always accompanied by her, his acts of valour are to be ascribed to this goddess, who supplied him with both wisdom and courage. Thus assisted we need not wonder that he should be said to have been a match for Hector or any other of the Trojans that engaged with him; as for his terrifying and wounding Mars and Venus, this is otherwise to be accounted for.

THIRD YEAR.

LATIN.—LIVY, BOOK XXI.

FRIDAY, APRIL 3rd :—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Itaque et ingenio feroces et multitudine freti et, quod metu cessisse credebant hostem, id morari victoriam rati, quod interesset amnis, clamore sublato passim sine ullius imperio, qua cuique proximum est, in amnem ruunt. et ex parte altera ripae vis ingens equitum in flumen inmissa, medio-

que alveo haudquaquam pari certamine concursum, quippe ubi pedes instabilis ac vix vado fidens vel ab inermi equite equo temere acto perverti posset, eques corpore armisque liber, equo vel per medios gurgites stabili; comminus eminusque rem gereret. pars magna flumine absumpta: quidam verticoso amni delati in hostis ab elephantis obtriti sunt. postremi, quibus regressus in suam ripam tutior fuit, ex varia trepidatione cum in unum colligerentur, priusquam a tanto pavore reciperent animos, Hannibal agmine quadrato amnem ingressus fugam ex ripa fecit, vastatisque agris intra paucos dies Carpetanos quoque in deditionem accepit. et iam omnia trans Hiberum praeter Saguntinos Carthaginiensium erant.

(B) Ad haec audienda cum circumfusa paulatim multitudine permixtum senatui esset populi concilium, repente primores secessione facta, priusquam responsum daretur, argentum aurumque omne ex publico privatoque in forum conlatum in ignem ad id raptim factum conicientes eodem plerique semet ipsi praecipitaverunt. cum ex eo pavor ac trepidatio totam urbem pervasisset, alius insuper tumultus ex arce auditur. turris diu quassata prociderat, perque ruinam eius cohors Poenorum impetu facto cum signum imperatori dedisset nudatam stationibus custodiisque solitis hostium esse urbem, non cunctandum in tali occasione ratus Hannibal totis viribus adgressus urbem momento cepit signo dato, ut omnes puberes interficerentur. quod imperium crudele, ceterum prope necessarium cognitum ipso eventu est: cui enim parci potuit ex iis, qui aut inclusi cum coniugibus ac liberis domos super se ipsos concremaverunt, aut armati nullum ante finem pugnae quam morientes fecerunt?

(C) In Italiam interim nihil ultra quam Hiberum transisse Hannibalem a Massiliensium legatis Romam perlatum erat, cum, perinde ac si Alpis iam transisset, Boii sollicitatis Insubribus defecerunt, nec tam ob veteres in populum Romanum iras, quam quod nuper circa Padum Placentiam Cremonamque colonias in agrum Gallicum deductas aegre patiebantur. itaque armis repente arreptis in eum ipsum agrum impetu facto tantum terroris ac tumultus fecerunt, ut non agrestis modo multitudo, sed ipsi triumviri Romani, qui ad agrum venerant adsignandum, diffisi Placentiae moenibus Mutinam confugerint. Mutinae cum obsiderentur, et gens ad oppugnandarum urbium artes rudis, pigerrima eadem ad militaria opera, segnis intactis adsideret muris, simulari coeptum de pace agi; evocatique ab Gallorum principibus legati ad conloquium non contra ius modo gentium, sed violata etiam, quae data in id tempus erat, fide conprehenduntur, ntibus Gallis, nisi obsides sibi redderentur, eos dimissuros.

2. Ext. (A) (*a*) Construe the first sentence, supplying the ellipsis with *qua* and with *proximum*, (*b*) After *quippe* what do you supply? (*c*) Why are *posset* and *gereret* in the subjunctive? (*d*) *Corpore armisque*:—What use of the ablative?

3. Ext. (B) (*a*) *Semet ipsi* or *ipsos*, and why? (*b*) *Cui enim parci potuit?*—show the construction. (*c*) *Nullum ante finem pugnae quam morientes fecerunt:*—What would be the more correct phrase?

4. Ext. (C) (*a*) How do you construe in Italiam? (*b*) *Colonias:*—derive and explain the word as used by the Romans. (*c*) *Triumviri:*—explain the formation of this word. (*d*) *Violata fide:*—A short note on the meanings of *fides*.

5. Give the derivation and meaning of:—passim, stipendium, sagulo, indole, praeda, agmen, inermi, moenia, piaculum, hospes, ambo, celoces.

6. Translate with explanatory *grammatical* notes:—(1) Sagunto capta —capto. (2) Quia taedebat imperii Punici. (3) Etsi priore foedere staretur, satis cantum erat Saguntinis sociis utrorumque exceptis. (4) Cui enim parci potuit? (5) Handquaquam prospere postquam ad effectum operis ventum est coeptis succedebat.

7. Write short explanatory notes on:—(1) Praerogativam militarem. (2) Anceps Mars. (3) Custodias stationesque. (4) Agmine quadrato. (5) De republica retulissent. (6) Pro contione. (7) Cum Gallis tumultuatum. (8) Latum ad populum.

8. Turn the following into *Orat. Obliq.*—"Hic vobis bellum et pacem portamus: utrum placet sumite." And the following into *Orat. recta:*—"Daret utrum vellet; et cum is * * * bellum dare dixisset; accipere se * * et quibus acciperent animis, iisdem se gesturos."

9. (*a*) Illustrate the uses of the Gerund and Gerundive; and also of the supines in *um* and *u*. (*b*) What cases do the following words take after them, severally:—expers, potior, credo, utor, extra, coram, pro, propter. (*c*) Give a list of verbs governing the Dative case; also of those governing the Ablative.

10. Translate into Latin, with different constructions:—"When his work was over he returned home to supper." (*Coenare.*)

THIRD YEAR.

LATIN PROSE COMPOSITION.

FRIDAY, APRIL 3RD:—AFTERNOON, 2 TO 4.

Examiner,..... ....REV. GEORGE CORNISH, LL.D.

Translate into Latin:—

Then Pyrrhus sent Cineas, a man famous1 for his eloquence, to offer terms of peace to the Romans; for the king used to say,2 "I have gained3 more by the tongue of Cineas than by the sword."4 And he was

of such a good[5] memory, that when he had been but a few days in the city he was able to call every one of the Senators by name, and to address everyone according[6] to his character.[7] And he having been brought in[8] to the Senate, said that the Romans had now made trial[9] of what the king was able to do. Let them therefore make use of the opportunity[10] and receive the peace offered them. For how could they hope that they would ever conquer Pyrrhus, who in the first encounter[11] had been so easily defeated by him? And since he argued[12] these things with the utmost skill,[13] the Fathers at first were wishing to receive these terms; but afterwards, being persuaded[14] by Appius Claudius, they said that they would not make peace before Pyrrhus had left Italy. And so Cineas returned to Pyrrhus without success.[15]

1. insignis. 2. dictito. 3. adipiscor. 4. ferrum. 5. tenax. 6. pro. 7. ingenium. 8. introduco. 9. experior. 10. occasio. 11. congressus. 12. dissero. 13. peritia. 14. *use* auctor. 15. *say*, the thing not having been done (*infectus*).

B.A. ORDINARY EXAMINATION, 1891.

FRIDAY, APRIL 3RD:—MORNING, 9 TO 12.

LATIN— { TACITUS—ANNALS, BOOK I.
JUVENAL.—SATIRES, VIII. & XIII.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL.D. }

1. Translate:—

(A) Fama dediti benigneque excepti Segestis vulgata, ut quibusque bellum invitis aut cupientibus erat, spe vel dolore accipitur. Arminium super insitam violentiam rapta uxor, vaecordem agebat, volitabatque per Cheruscos, arma in Segestem, arma in Caesarem poscens. neque probris temperabat; egregium patrem, magnum imperatorem, fortem exercitum quorum tot manus unam mulierculam avexerint. sibi tres legiones, totidem legatos procubuisse; non enim se proditione neque adversus feminas gravidas, sed palam adversus armatos bellum tractare. cerni adhuc Germanorum in lucis signa Romana, quae dis patriis suspenderit. coleret Segestes victam ripam, redderet filio sacerdotium hominum: Germanos numquam satis excusaturos, quod inter Albim et Rhenum virgas et secures et togam viderint.

2. Ext. (A) (1) Explain the case and usage of ut quibusque bellum invitis aut cupientibus erat. (2) What usage of the Latin is exemplified by such a phrase as dediti benigneque excepti Segestis? Contrast it

with English usage. (3) Define and illustrate from the above ext. *Oratio Obliqua*, and change from sibi legiones to suspenderit into *Oratio Recta*

3. Translate :—

(B) Nam senem Augustum devinxerat adeo, uti nepotem unicum Agrippam Postumum, in insulam Planasiam proiecerit, rudem sane bonarum artium et robore corporis stolide ferocem, nullius tamen flagitii conpertum. At hercule Germanicum Druso ortum octo apud Rhenum legionibus inposuit adscirique per adoptionem a Tiberio iussit, quamquam esset in domo Tiberii filius iuvenis, sed quo pluribus munimentis insisteret. Bellum ea tempestate nullum nisi adversus Germanos supererat, abolendae magis infamiae ob amissum cum Quintilio Varo exercitum quam cupidine proferendi imperii aut dignum ob praemium. Domi res tranquillae, eadem magistratuum vocabula; iuniores post Actiacam victoriam, etiam senes plerique inter bella civium nati: quotus quisque reliquus qui rem publican vidisset?

(C) Pervaserat interim circumventi exercitus fama et infesto Germanorum agmine Gallias peti: ac ni Agrippina inpositum Rheno pontem solvi prohibuisset, erant qui id flagitium formidine auderent. sed femina ingens animi munia ducis per eos dies induit, militibusque, ut quis inops aut saucius, vestem et fomenta dilargita est. tradit C. Plinius, Germanicorum bellorum scriptor, stetisse apud principium pontis, laudes et grates reversis legionibus habentem. id Tiberii animum altius penetravit. non enim simplices eas curas, nec adversus externos *studia* militum quaeri. nihil relictum imperatoribus, ubi femina manipulos intervisat, signa adeat largitionem temptet, tamquam parum ambitiose filium ducis gregali habitu circumferat Caesaremque Caligulam appellari velit. potiorem iam apud exercitus Agrippinam quam legatos, quam duces; conpressam a muliere seditionem, cui nomen principis obsistere non quiverit.

4. Ext. (B) (1) *Devinxerat*:—Give the name of the subject of this verb, with a sketch of her character. (2) Ob amissum cum Quintilio Varo exercitum. Eadem magistratuum vocabula. Post Actiacam victoriam :—Write short explanatory notes on these, giving dates. Ext. (C) (3) Imposium Rheno pontem :—What localities have been suggested? (4) Laudes et grates habentem :—Note the peculiar word here. (5) Write a short account of Agrippina; how was she related to the notorious woman of the same name in after-times?

5. Translate carefully the following extracts, adding a note grammatical or other, where you may deem proper :—

(*a*) Mox indiscretis vocibus pretia vacationum, augustias stipendii duritiam operum ac propriis nominibus incusant vallum, fossas, pabuli materiæ lignorum adgestus, et si qua alia ex necessitate aut adversus otium castrorum quaeruntur.

(*b*) Indulserat ei ludicro Augustus, dum Maecenati obtemperat; neque ipse abhorrebat talibus studiis, et civile rebatur misceri voluptatibus vulgi.

(*c*) Atque ubi primum tui copia, vetera novis et quieta turbidis antehabeo, neque ob praemium, sed ut me perfidia exsolvam, simul genti Germanorum idoneus conciliator, si paenitentiam quam perniciem maluerit.

(*d*) Accendebat haec onerabatque Seianus, peritia morum Tiberii odia in longum jaciens, quae reconderet auctaque promeret.

6. Translate carefully the following extracts, adding an historical, grammatical, or mythological note where you think such to be needed :—

(*a*) Libera si dentur populo suffragia, quis tam
Perditus, ut dubitet Senecam praeferre Neroni,
Cujus supplicio non debuit una parari
Simia, nec serpens unus, nec culeus unus?
Par Agamemnonidae crimen ; sed causa facit rem
Dissimilem. Quippe ille deis auctoribus ultor
Patris erat caesi media inter pocula: sed nec
Electrae jugulo se polluit aut Spartani
Sanguine conjugii ; nullis aconita propinquis
Miscuit, in scena nunquam cantavit Orestes,
Troica non scripsit.

(*b*) Rarus enim ferme sensus communis in illa
Fortuna. Sed te censeri laude tuorum,
Pontice, noluerim sic, ut nihil ipse futurae
Laudis agas. Miserum est aliorum incumbere famae
Ne collapsa ruant subductis tecta columnis.
Stratus humi paimes viduas desiderat ulmos.

(*c*) Sed quum pervigiles placet instaurare popinas,
Obvius assiduo Syrophœnix udus amomo
Currit, Idumaeae Syrophœnix incola portae,
Hospitis affectu dominum regemque salutat,
Et cum venali Cyane succincta lagena.

(*d*) Pecudem spondere sacello
Balantem et laribus cristam promittere galli
Non audent: quid enim sperare nocentibus aegris
Concessum? vel quae non dignior hostia vita?

(*e*) Te nunc, delicias, extra communia censes
Ponendum? Qui tu gallinae filius albae,
Nos viles pulli nati infelicibus ovis?

7. Note the chief characteristics of the style of Tacitus.

8. (*a*) State the rules for the sequence of tenses in Latin. (*b*) To what Tenses in Greek do the *Perf. Indic.*, *definite* and *indefinite*, respectively correspond? (*c*) Explain the use of the *Predicative Dative*, and also the

use of the *Dative* with verbs compounded with *ex, ab,—e. g., Victoriam hosti* extorqueamus, confessionem erroris civibus. (Liv. XXII., 29.)

9. Explain the following:—

(1) Cecropides; (2) Ducunt epiredia; (3) Per conventus; (4) Idumaeae incola portae; (5) Syrma Antigones; (6) Mirmillonis in armis; (7) Multa contingere virga; (8) Perdere naulum.

10. Give the exact meaning and derivation, when you can, of the following terms used by Juvenal:—chirographa, pyxide, conchylia, sportula, coenacula, trabeam, diadema, alapas, triscurria, pulpita, ergastula. Name derivatives in English from any.

B. A. ORDINARY EXAMINATION.

GREED AND ROMAN HISTORY AND LATIN PROSE COMPOSITION.

FRIDAY, APRIL 3RD:—AFTERNOON, 2 TO 5.

Examiners,..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, LL.D.

(A) *From the close of the Peloponnesian War to the death of Philip.*

1. An account of the battle of Cnidus. What were its consequences?

2. Describe the character and results of the Peace of Antalcidas.

3. What policy did the Athenians adopt after the battle of Leuctra? A short account of Alexander of Pherae.

4. Trace the steps by which Philip gained the ascendency in the affairs of Greece.

5. What was the policy of Demosthenes?

(B) *The Twelve Caesars.*

1. How did Octavianus gather into his own hands supreme power? In what respects did his policy differ from that of Julius Cæsar? Give the derivation and meaning of the title Augustus.

2. Was the establishment of the Empire for the benefit of the Provinces or not?

3. What was the relation of Tiberius to Augustus? Sketch the character of Tiberius.

4. Give an account of the contests for the throne in the years A. D 68-70.

5. What important events happened in the reigns of Vespasian and Titus?

(C) *Latin Prose Composition.*

Titus Pomponius was born on the 9th of March, 109 years before the Christian era, and thus it is evident to those acquainted with the true order of Roman events that he was three years older than his friend Cicero. Living at a time when he saw it was dangerous to be in Rome, he removed with the large fortune he had to Athens, where he acquired such skill in Greek, that he was not only acknowledged to write and speak it the most elegantly of any stranger, but was even preferred by some to the Athenians of his day, and was called Atticus, the name by which he is commonly known to us who are some times content without knowing the whole. As a proof of his learning, he wrote several works, all of which, it is deeply to be regretted, have perished; and what may appear strange of his numerous letters to Cicero, not one is extant, though Cicero's have been preserved. On his return to Rome, instead of joining any of the factions that prevailed at the time, he strove to please all, and there scarcely was a distinguished man in the city that was not anxious to secure his friendship.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

TUESDAY, APRIL 14TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

Æschylus, Prometheus Vinctus, (*a*) vss. 242-262. (*b*) vss. 887-906.

2. (*a*) Be careful to give the exact import of the Particles used in the dialogue of ext. (A). (*b*) Point out Doric forms in (*b*), and give their Attic equivalents. (*c*) To whom, according to Paley and Wecklein, is the reference in ἢ σοφὸς κ.τ.λ. and what was the proverb formulated by him? (*d*) Show the composition and meaning of the following words as illustrations of the use of compounds by Æschylus: —λεωργόν, αἰπυμήτα, χειρωναξία, ἀνήριθμον, ἀδήριτον, ναρθηκοπλήρωτον, προσπορπατός, πεδαρσίοις, ποικιλείμων, πετρηρεφῆ. (*e*) vs. 74:—σχεθεῖν or σχέθειν? vs. 17.—εὐωριάζειν or ἐξωριάζειν? vs. 28:—ἐπηύρω, ἐπηύρον, or ἀπηύρω? Comment on these variants.

3. Translate:—
Sophocles, Antigone, (*a*) vss. 223-236. (*b*) vss. 1115-1136.

4. (*a*) In (*a*) explain the use of the oblique cases in :—*φροντίδων, ὁδοῖς, σχολῇ, της ἐλπίδος.* (*b*) In (*b*) explain the references in :—*πολυώνυμε. ἄγαλμα* K. *νύμφας. ἀμφέπεις* Ἰταλίαν. *ὑπὲρ διλόφοιο πέτρας* * * *λιγνύς.* Κωρύκιαι *νύμφαι.* Νυσαίων *ὀρέων.* (*c*) Construe vss. 857-861 and 959-961, showing the use of *ψαύειν.*

5. (*a*) Translate the following extt., adding an explanatory note where you see fit :— (1) *ἀλλ' ἄνδρα, κεἴ τὶς ἦ σοφὸς τὸ μανθάνειν πόλλ' αἰσχρὸν οὐδὲν καὶ τὸ μὴ τείνειν ἄγαν.*

(2) *ὄρσεις με τἀκίνητα διὰ φρενῶν φράσαι.*

(3) *τοιαῦτά σου* * * * *βέβαια.* (vss. 1084-1086).

(4) *ἄλλῳ γὰρ ἢ μοι χρή γε τῆσδ' ἀρχειν χθονός* ; (*b*) vss. 71, *ἀλλ' ἴσθ' ὁποία—ὁποῖα—ὁποίᾳ—σοι δοκεῖ* :—Distinguish between these variants. Also between Βορέας and Βορεάς, giving the *Gen.* of each. (*c*) Cite *Ionic* forms used by Æschylus and Sophocles. How may they be accounted for ?

6. Translate :—

Xenophon, Hellenics (*a*) Bk. I., chap. 6, §§ 6-11, inclusive ; and (*b*) Bk. II., chap. 4, §§ 10-12 inclusive.

7. Comment on the character of Callicratidas as contrasted with Lysander. (*b*) Translate and explain the following military or naval terms :—(1) *θέσθαι τὰ ὅπλα.* (2) *συμφράξαντες.* (3) *ἐπειδὴ ὡρμίσαντο.* (4) *οἱ ἐπιβάται.* (5) *δύο λόχοι βοηθήσαντες.* (6) *τὰς δὲ λοιπὰς ὑπὸ τῷ τείχει ἀνείλκυσε.* (7) *τὰ παραῤῥύματα παραβάλων.* (8) *ἐπί μιᾶς τεταγμένοι.* (9) *ἵνα μὴ διέκπλουν διδοῖεν.* (10) *κατὰ πόδας πλέοντες.* (11) *παρετάξαντο ν μετώπῳ.* (12) *ἡ Πάραλος.*

8. Translate :—

Thucydides, Book VII., chap. 56.

9. (*a*) Explain the phrase *ἐν τοῖς πρῶτοι.* (*b*) Translate, and explain the syntax of the following passages in Book VII. : — (1) *ἐφθασαν περιοικοδομήσαντες καὶ παρελθόντες τὴν τῶν Ἀθηναίων οἰκοδομίαν, ὥστε μηκέτι μήτε αὐτοὶ κωλύεσθαι ὑπ' αὐτῶν.* (c. 6). (2) *ἢ τῷ ὄχλῳ πρὸς χάριν τὶ λέγοντες.* (c. 8). (3) *τοῖς τε γὰρ ἐπιχειρήμασιν ἑώρων οὐ κατορθοῦντες καὶ τοὺς στρατιώτας ἀχθομένους τῇ μονῇ.* (c. 47). (4) *παύσαντες τὴν φλόγα καὶ τὸ μὴ προσελθεῖν ἐγγὺς τὴν ὀλκάδα τοῦ κινδύνου ἀπηλλάγησαν.* (c. 53). (5) *νομιζων οὐ τὸ ὑπομένειν ἐν τῷ τοιούτῳ ἑκόντας εἶναι καὶ μάχεσθαι σωτηρίαν.* (c. 81). (*c*) Distinguish between—Σικανοί, Σικελοί and Σικελιῶται.

10. Translate :—

Ὡς δὲ Δαρεῖος ἐπῆγεν ἤδη τὴν φάλαγγα πᾶσαν, ἐνταῦθα Ἀλέξανδρος Ἀρέτην μὲν κελεύει ἐμβαλεῖν τοῖς περιϊππεύουσι τὸ κέρας σφῶν τὸ δεξιὸν ὡς ἐς κύκλωσιν· αὐτὸς δὲ τέως μὲν ἐπὶ κέρως τοὺς ἀμφ' αὑτὸν ἦγε· τῶν δὲ ἐκβοηθησάντων ἱππέων τοῖς κυκλομένοις τὸ κέρας τὸ δεξιὸν παραρρηξάντων τι τῆν πρώτης φάλαγγος τῶν βαρβάρων ἐπιστρέψας κατὰ τὸ διέχον καὶ ὥσπερ ἐμβολον ποιήσας τῆς τε ἵππου τῆς ἑταιρικῆς καὶ τῆς φᾶλαγγος τῆς ταύτῃ τεταγμένης ἦγε ὁρόμῳ τε καὶ ἀλαλαγμῷ ὡς ἐπὶ αὐτὸν Δαρεῖον. καὶ χρόνον μέν τινα ὀλίγον ἐν χερσὶν ἡ μάχη ἐγένετο· ὡς δὲ οἵ τε ἱππεῖς οἱ ἀμφ' Ἀλέξανδρον καὶ αὐτὸς Ἀλέξανδρος εὐρώστως ἐνέκειντο ὠθισμοῖς τε χρώμενοι καὶ τοῖς ξυστοῖς τὰ πρόσωπα τῶν Περσῶν κόπτοντές, ἤ τὲ φάλαγξ ἡ Μακεδονικὴ πυκνὴ καὶ ταῖς σαρίσαις πεφρικυῖα ἐμβεβλήκει ἤδη αὐτοῖς, καὶ πάντα ὁμοῦ τὰ δεινὰ καὶ πάλαι ἤδη φοβερῷ ὄντι Δαρείνετο ἐφαίνετο, πρῶτος ἐπιστρέψας ἔφευγεν.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

LATIN.

WEDNESDAY, APRIL 15TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it necessary, the following passages :—

(A) Tacitus, Annals, Book II., (*a*) chap. 41, (*b*) chap. 61.

2. (*a*) Explain in ext. (*a*) the meaning of:—*ductu* Germanici ; *auspiciis Tiberii.* bellum pro *confecto* accipiebatur. (*b*) Avunculum Marcellum. (*c*) Write a short note on *Memnonis saxea effigies.* How was the phenomenon here referred to probably produced ? *Rubrum mare* :—Give the Greek and modern (English) names.

3. Write short explanatory notes (grammatical) on the following :—(*a*) Ut Germanicum *suetis legionibus* abstraheret. (*b*) *Celerandæ victoriæ* intentior. (*c*) Id quoque vocabulum mutat *Mosa flumine.* (*d*) Laetus *animi.* (*e*) Posse de controversiis conloquio transigi. (*f*) Quod si regrederetur obsistente Sentio civile bellum *incipi.*

4. Translate, Cicero, De Officiis :—(*a*) Book I., chap. III., §§ 8 and 9. (*b*) Book III., chap. XV., § 61.

5. (*a*) Write a note on the term *καθήκοντα*, as used by the Stoics. (*b*) The object and character of this treatise by Cicero.

6. Translate, Juvenal :—(*a*) Sat. VIII., vss. 259-268. (*b*) Sat. X., vss. 133-146 (Explain the form *Induperator*).

7. (1) Explain these social or political references in Sat. X. :—(*a*) Quos sportula fecit amicos. (*b*) Genua incerare deorum. (*c*) Sejanus ducitur unco. (*d*) Verbosa et grandis epistola venit a Capraeis. (*e*) Egregios equites. (*f*) Quinquatribus. (*g*) Jam dextra computat annos. (2) Ext. (*a*) Note the tense and mood of *laxabant*, *deceret*, *miraretur*, and explain the use of the Genitive in *egum* prima securis. (*b*) What variants occur in vss. 38, 42, 68, 155, 171 ?

8. Translate :—
Persius (*a*) Sat. V., vss. 30-44 ; and (*b*) VI., vss. 51-66.

9. (*a*) Point out peculiarities of construction by Persius. (*b*) Whom did he take as his literary model ? How would you account for his frequent obscurity ? (*c*) Cite passages from these two satires of doubtful and disputed interpretation. (*d*) *or* Enni, etc. :— Explain this use of the word *cor*, and the reference to Ennius.

10. Translate, noting various readings or interpretations :—

(*a*) Verterit hunc dominus, momento turbinis exit
Marcus Dama. Papæ ! Marco spondente recusas
Credere tu nummos ? Marco sub judice palles ?
Marcus dixit, ita est : assigna, Marce, tabellas.

(*b*) Disce, sed ira cadat naso rugosaque sanna.
Dum veteres avias tibi de pulmone revello.
Non prætoris erat stultis dare tenuia rerum
Officia, atque usum rapidæ permittere vitæ.
Sambucam citius caloni aptaveris alto.

(*c*) Sed cœnam funeris heres
Negliget iratus, quod rem curtaveris ; urnæ
Ossa inodora dabit, seu spirent cinnama surdum,
Seu ceraso peccent casiæ, nescire paratus.
Tune bona incolumis minuas ? Et Bestius urget
Doctores Graios : "Ita fit, postquam sapere urbi
Cum pipere et palmis venit nostrum hoc maris expers,
Fœnisecæ crasso vitiarunt unguine pultes."

(*d*) Hæc miscere nefas ; nec, quum sis cetera fossor,
Tres tantum ad numeros satyrum moveare Bathylli.
"Liber ego." Unde datum hoc sumis, tot subdite rebus ?
An dominum ignoras, nisi quem vindicta relaxat ?
I puer, et strigiles Crispini ad balnea defer,
Si increpuit, cessas nugator ?

11. Write explanatory notes on :—(1) Verterit. (2) Dama. (3) Sambucam. (4) Nescire paratus. (5) Maris expers :—What different interpretations ? (6) Satyrum Bathylli.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

GREEK AND LATIN PROSE COMPOSITION.

THURSDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek:—

1. The citizens were astonished at the shamelessness of the despots, but held in great honour the justice of their own rulers.

2. Unless you do what is right, you will not escape with impunity the punishment that awaits evil-doers.

3. The philosopher said that then only were men prosperous and happy when they did their duty, and were apt to perform honourable actions for the benefit of the State.

4. The market-people came into camp with abundant provisions which they sold to the troops at very high prices.

5. By constantly asserting that he was the son of Zeus he tried to persuade the people that he was a god, but only a few believed him.

6. In a free State no one should have such power as to escape punishment if he trangresses the laws.

(B) Translate into Latin:—

Demosthenes, the Athenian general, had long desired to seize Pylus, that from thence the Athenians and Messenians might ravage Laconia. Accordingly, having obtained leave from the people of Athens, he tried to persuade the leaders of the fleet to fortify the promontory. They, however, said they would not stay there, since they were sent to Corcyra to subdue the aristocratic party. But the soldiers, being compelled by a storm to stay in the bay, began, by Demosthenes' advice, for the sake of amusement, to build a fort. Demosthenes, being left behind with 1000 soldiers and five ships, when he saw the Spartan fleet approaching, sent off two of the latter to ask for help. Meanwhile the Athenians repulsed the Spartans, who had attacked them under the leadership of Brasidas. Soon the Athenian fleet came to their help, attacked the Spartan fleet unprepared, and defeated it. Ambassadors were then sent by the Ephors to the assembly at Athens to ask for peace, and returned without success; but the Athenians determined to blockade Sphacteria, where 300 Spartans had been posted. And when the island had been besieged for some months, the Athenians, fearing that on the approach of winter they might be compelled to raise the siege, determined to send an army to take it by force, being persuaded by Cleon, who chose Demosthenes to be next to him in command. It happened that a fire having by chance arisen, the trees and

bushes on the island had been burnt up. Then Demosthenes, using especially his light-armed troops, so harassed the Spartans that they retreated to an old fort at the further part of the island, where they would have been safe, if some Messenians, who knew the island of Sphacteria well, had not gone round and attacked them in rear. Then at last they surrendered, and were all taken to Athens.

THIRD YEAR EXAMINATION FOR HONOURS IN CLASSICS.

HISTORY AND GENERAL PAPER.

FRIDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner, ... REV. GEORGE CORNISH, LL.D.

1. An account of the Pelasgi. What are Grote's views respecting them?

2. Set forth the causes of the early superiority of the Ionic Colonies in Asia Minor over the mother-country in poetical, philosophical, and historical literature.

3. Discuss the causes that operated to prevent the Greeks from becoming a united political community.

4. Give the substance of Grote's chapter on the Asiatic Ionians, with a short account of the Ionic Revolt.

5. Describe, either by a map or by words, the physical features and ancient political divisions of Italy.

6. The constitution and functions of the Comitia:—(*a*) *Curiata*, (*b*) *Centuriata*, and (*c*) *Tributa*, severally, under the Republic.

7. How was the Senate constituted, and what part did it take in the administration of the State?

8. (*a*) Give the principal rules for the accentuation of the Greek verb. (*b*) Accentuate, with the proper *spiritus*, the following ext.:—

Αμαζονες γαρ Αρεως μεν το παλαιον ησαν θυγατέρες, οικουσαι δε παρα τον Θερμωδοντα ποταμον, μοναι μεν ωπλισμεναι σιδηρῳ των περι αυτας πρωται δε των παντων εφ ιππους αναβασαι, οις ανελπιστως δ απειριαν των εναντιων ηρουν μεν τοὺς φεύγοντας, απελειπον δε τους διωκοντας ενομιζοντο δε δια την ευψυχιαν μαλλου ανδρες η δια την φυσιν γυναικες· πλεον γαρ εδοκουν των ανδρων ταις ψυχαις διαφερειν η ταις ελλειπειν.

(*c*) Cite five pairs of words having different meanings according to difference of accent.

9. (*a*) What are the *Casus Absoluti* in Greek and Latin? Give the rules for their use. (*b*) Explain *Attic attraction*. (*c*) The various kinds of *Conditional* sentences and their structure.

10. (*a*) Give an account of dramatic contests at Athens, and show why the Drama occupied so prominent a position as it did. (*b*) What steps were usually taken before a play was placed upon the stage? (*c*) The place and function of the Chorus in the Greek Drama, and the phases through which it passed in Tragedy. (*d*) Compare the three great Attic Dramatists in their use of the Chorus. (*e*) Account for the difference between the dialect of the Chorus and that of the dialogue in Greek Tragedy.

MATHEMATICS AND NATURAL PHILOSOPHY

FIRST YEAR.

GEOMETRY, ARITHMETIC.

WEDNESDAY, APRIL 8TH:—MORNING, 9 to 12.

Examiners,..... { ALEXANDER JOHNSON, M.A., LL D.
GEORGE H. CHANDLER, M.A.

1. If two circles intersect one another they cannot have the same centre.

(*a*) Prove that the right line joining their centres is perpendicular to their common chord.

2. If the line bisecting the vertical angle of a triangle cut the base, it divides it into parts which are proportional to the conterminous sides.

(*a*) Prove that if the external angle at the vertex be bisected, the base produced is cut in the same ratio as the sides.

(*b*) Given the base and ratio of the sides of a triangle, find the locus of the vertex.

3. Find a third proportional to two given lines.

(*a*) The sides of a right-angled triangle are .8 and .1 respectively, from the extremity of the latter a perpendicular to the hypotenuse is drawn to meet the former produced. Calculate the length of the part produced.

4. Find the interest on $4568 at $5\frac{1}{2}$ per cent. per annum for 7 months.

5. From a point on the diameter of a circle at the distance of 18 inches from the centre a tangent is drawn; find its length if the radius of the circle be 5 inches.

6. If two parallelograms have an angle of the one equal to an angle of the other, state and prove the proposition by means of which the ratio of the areas of the parallelograms may be found.

7. Divide a given straight line, so that the whole line shall be to the greater segment as the greater segment is to the less. Also divide the line externally into segments which shall have the same ratio.

8. If two chords of a circle intersect within or without the circle, the rectangle contained by the parts of the one shall be equal to the rectangle contained by the parts of the other.

9. In what time would 2 men, 5 women, and 18 boys, working together, do a piece of work which could be done in 112 hours by 4 men or 6 women or 18 boys?

10. The length of a rectangular table is twice the breadth; the distance between opposite corners is one metre, find in feet and inches the whole distance around the table, one metre being 39.37 inches.

FIRST YEAR.

TRIGONOMETRY—ALGEBRA.

FRIDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, M.A., LL.D.
G. H. CHANDLER, M.A.

1. The following formula, in which A is the circular measure of an angle, is frequently used in Astronomy, prove it:—

$$A'' = \frac{A}{\sin 1''}.$$

2. Prove $\cos A = \pm \sqrt{\frac{1}{1 + \tan^2 A}}$: $\sin A = \frac{\pm \sqrt{\sec^2 A - 1}}{\sec A}$

(*a*) When should the sign + be used in each case, and when the negative sign?

3. In any triangle prove

$$\sin \tfrac{1}{2} A = \sqrt{\frac{(s-b)\ (s-c)}{bc}}$$

(*a*) If $a = 5 \quad b = 4 \quad c = 3$, find *by the formula* the value of A, without the use of tables.

4. Prove $\sin A + \sin B = 2 \sin \frac{1}{2}(A+B) \cos \frac{1}{2}(A-B)$.

5. Solve the equations :—

(*a*) $\frac{1}{1+x} - \frac{1}{3-x} = \frac{6}{35}$;

(*b*) $ax + by + c = 0$; $a'x + b'y + c' = 0$;

(*c*) $\frac{3x-1}{2x-1} - \frac{4x-2}{3x-1} = \frac{1}{6}$;

(*d*) $.\dot{6}x + .25 - \frac{1}{9}x = 1.8\dot{3} - .75x - \frac{1}{3}$

6. Find at what time between 3 and 4 o'clock the hands of a watch are at right angles.

7. Find the greatest common measure of $4x^3 - 3x^2 - 24x - 9$ and $x^3 - 2x^2 - 53x - 39$.

8. Reduce 18°, 30°, 90°, 135° to radians. Express the angle of a regular polygon of n sides in degrees and in radians. If π were exactly $3\frac{1}{7}$, shew that the angle of a regular polygon of 44 sides would be exactly 3 radians.

9. Express in terms of the tangent all the other trigonometrical ratios.

10. Write down the values of the following: cos 135°, sin 210°, sec 240°, tan 420°, cosec 930°, cot 945°.

11. In any triangle

$$a^2 = b^2 + c^2 - 2bc \cos A.$$

Two adjacent sides of a parallelogram are 3 and 4 inches, respectively; they contain an angle of 15°, find the lengths of the diagonals.

12. Add $\sqrt[3]{40}$, $\frac{1}{2}\sqrt[3]{320}$, $\sqrt[3]{135}$, and $\sqrt[3]{\frac{5}{81}}$; also find the square root of

$$x^{\frac{2}{3}} - 6\left(x^{\frac{1}{3}} + y^{\frac{1}{2}}\right) + 2x^{\frac{1}{3}}y^{\frac{1}{2}} + y + 9.$$

13. Solve the equations

(1) $a + x - \sqrt{a^2 + x^2} = b$,

(2) $x - \frac{x^3 - 8}{x^2 + 5} = 2$,

(3) $\begin{cases} 3xy + 2x + y = 485 \\ 3x = 2y. \end{cases}$

14. Solve the general quadratic equation

$$ax^2 + bx + c = 0.$$

and hence shew how the sum and product of the roots of any quadratic may be written down without solving the equation.

INTERMEDIATE EXAMINATION.

EUCLID—ARITHMETIC.

WEDNESDAY, APRIL 8TH:—MORNING, 9 TO 12.

Examiners. .... { ALEXANDER JOHNSON, M.A., LL.D. / JOHN COX, M.A. / A. H. WALTERS, B.A.

1. Equiangular triangles have the sides about the equal angles proportional and the sides opposite the equal angles are homologous. (Define homologous.)

(*a*) If three lines intersect in a point, all parallel lines drawn across them are cut into segments which are in the same ratio.

2. Find a mean proportional between two given lines.

3. The sum of the squares of any two lines exceeds the square of their difference by twice the rectangle under the lines.

4. In a given circle inscribe a quindecagon.

5. If the time of oscillation of a pendulum be proportional to the square root of its length, and the length of a pendulum which oscillates once in a second be 39.139 inches, what is the length if the time of oscillation be 4 seconds?

6. Divide $4\frac{5}{8}$ by the difference between $\frac{2}{3}$ of 10 and $\frac{3}{4}$ of ·068.

7. Find the area in square feet of the ring enclosed between two concentric circles whose radii are 7 ft. 6 in. and 4 ft. 4 in. respectively.

8. Prove that the angles in the same segment of a circle are equal to one another.

If an equilateral triangle be inscribed in a circle, the distances of any point on the circumference from two of its angular points are together equal to its distance from the third.

9. Inscribe a circle in a given triangle. The base and magnitude of the vertical angle of a triangle are given, shew that the centre of the inscribed circle will always be on one of two fixed circles.

10. Similar triangles are to one another in the duplicate ratio of their homologous sides.

11. Find in decimals the value of :—

(1) $1 + \frac{1}{1} + \frac{1}{2} + \quad + \frac{1}{24} + \frac{1}{120}$.

(2) ·0111 × 9·1 ÷ ·00481.

(3) $\dot{4}\cdot\dot{5}4$ / $2\cdot2\dot{7}\dot{2}$

12. A square park enclosing 5 square miles 40 acres is enclosed by a fence, inside which is a path 1 yard broad. Find the cost of gravelling the path at 1 dollar per 1000 square yards.

13. The number of paupers was 948,000, being 4·7 per cent. of the population; after 20 years it is reduced to 787,000, being 3 per cent. of the population; how much per cent. has the population increased in the interval?

INTERMEDIATE EXAMINATION.

TRIGONOMETRY—ALGEBRA.

FRIDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, M.A., LL.D.
JOHN COX, M.A.
A. H. WALTERS, B.A.

1. A and B are two stations in a plain which are 34,920 feet apart, C is the top of a distant church spire, the angles CAB and CBA are found by measurement to be 61° 53′ and 76° 49′ respectively, find the distance of C from A.

2. From the top and bottom of a cliff, which is 200 feet high, the depressions of a ship at sea are observed to be 18° 21′ and 15° 28′; what is its distance in yards from the bottom of the cliff?

3. Prove $\sin (A + B) = \sin A \cos B + \cos A \sin B$:

$$\tan (A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B};$$

$$\cos (\pi - A) = -\cos A$$

4. Solve the equations:

$$3x + 7y = 27 \;:\; 5x + 2y = 16$$

$$ax + by = a^2 \quad bx + ay = b^2$$

$$x^2 - 3x = 18.$$

5. At an election, the majority was 162, which was $\frac{3}{11}$ths of the whole number of votes, what was the number of votes on each side?

6. Find the greatest common measure of $x^3 + 2x^2 - 13x + 10$, and $x^3 + x^2 - 10x + 8$.

7. Define a logarithm, and prove the properties of logarithms on which depends their usefulness in calculating products and quotients. What are the advantages of 10 as a base?

Find by logarithms to four places of decimals

$$2\sqrt{\frac{4 \times 3.1416 \times 28.37^3}{89.71}} \times (39.1^2 - 10.9^2)$$

8. Prove the formulæ

$$\tan^2\theta - \sin^2\theta = \sin^4\theta \sec^2\theta$$

$$\sin P + \sin Q = 2 \sin \frac{P+Q}{2} \cos \frac{P-Q}{2}$$

9. The top of a tower across a river is observed by means of a theodolite placed five feet above the water, to be at an elevation of 45° above the horizon. The image of the top seen by reflection in the water is observed at an angular depression whose tangent is 1.08. Find the height of the tower, assuming that the image appears as much below the surface of the water as the object is above it.

10. Simplify

(1) $$\frac{a^5 + 7a^4 - 3a^3 - 21a^2 + 9a + 63}{a^3 + 6a^2 - 2a +}$$

(2) $$\frac{(a+b)^3}{a^3+b^3} \times \frac{a^2 - ab + b^2}{a^3 - b^3} \div \frac{a^2 - b^2}{a^2 + ab + b^2}$$

(3) $$\left\{1 - \frac{4}{x-1} + \frac{12}{x-3}\right\} \times \left\{1 + \frac{4}{x+1} - \frac{12}{x+3}\right\}.$$

11. Solve

(1) $$\sqrt{8x+1} - \sqrt{x+1} = \sqrt{3x}$$

(2) $$x + y = \frac{29}{48}; \quad \frac{1}{x} + \frac{1}{y} = 7\frac{11}{15}.$$

(3) $$x + 5 - \frac{8}{x+5} = 7.$$

12. A man walks up a mountain at the rate of 2 miles an hour, and down again by a way 6 miles longer at the rate of $3\frac{1}{2}$ miles an hour. He is out 8 hours altogether. How far has he walked?

THIRD YEAR.

MECHANICS—HYDROSTATICS.

THURSDAY, APRIL 2ND :—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, LL.D.
JOHN COX, M.A.

Write the answers on separate sets of paper, headed A and B respectively, to correspond to the questions.

A.

1. Prove that the resultant of two forces, P and Q, which act on the same point of a body, and make with one another an angle ϕ is given by the equation

$$R^2 = P^2 + Q^2 + 2PQ\cos\phi.$$

(*a*) If the forces be equal and the angle 60°, find the magnitude of the force when the resultant is one dyne.

2. State the Law of Universal Gravitation, and express it algebraically. Give an outline of the steps by which Newton was led to it. In applying it to the case of the Earth, show why it is not in the strictest sense true that the weight of a body is equal to the sum of the weights of all its parts.

(*a*) Assuming the radius of the Moon to be 1000 miles and its mass to be $\frac{1}{80}$th of the mass of the Earth, find (1) the acceleration due to gravity on its surface, (2) the weight of a man who on the earth weighs 150 lbs.

3. Define a *constant* force, and assuming $s = \frac{vt}{2}$, prove $v^2 = 2fs$.

4. State Dalton and Gay-Lussac's law, and assuming $a = \cdot00366$, prove the formula

$$V' = V\,\frac{273 + t'}{273 + t} \times \frac{P}{P'}$$

5. If the specific gravity of milk be 1.031, find the specific gravity of a mixture of milk and water in equal quantities. Prove any formula you employ.

6. A vertical tube, 18 feet long and 1 sq. inch in section is inserted into the top of a closed cubical tank, of which one side is horizontal and 2 feet in length; the tube and tank are filled with water; find, 1o the pressure on the bottom of the tank; 2o the total weight in the tube and tank.

B.

7. What must be known about a force in order to specify it completely?

Find the resultant of two parallel forces acting in the same direction, and deduce the principle of the lever acted on by forces perpendicular to its length.

A uniform rod five feet long is supported on two props which are three feet apart, so that the rod projects two feet beyond one of the props Shew that the pressure on one prop is five times that on the other.

8. State Newton's Second Law of Motion, explaining carefully the terms used.

A train weighing 100 tons is set in motion by a force equal to the weight of $2\frac{3}{4}$ tons. How soon will it acquire a speed of 60 miles an hour?

9. Explain the terms *foot-pound*, *horse-power*.

If the resistances to motion, due to friction, air, etc., are equivalent to a retarding force of 16 lbs. per ton weight of a train, what is the H P of an engine which can just keep a train of 100 tons running at 40 miles an hour on a level?

10. Two balls collide directly. Upon what principles must the resulting motions be calculated?

If two equal perfectly elastic balls collide, prove that they exchange velocities.

11. Find the conditions of equilibrium of a body floating in a fluid. What extra condition is necessary that the equilibrium may be stable?

A piece of metal weighs 396 grammes in water and 418 grammes in air. What is its specific gravity?

12. Describe the action of the Suction Pump. Why is the depth from which it can raise water limited?

THIRD YEAR.

OPTICS—ASTRONOMY.

FRIDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, M.A., LL.D.
JOHN COX, M.A.

1. A luminous point is placed in front of a concave mirror, whose focal length is $36\frac{1}{2}$ centimetres, at a distance of 200 centimetres from the surface; investigate a general formula for determining the position of the conjugate focus, and calculate it in this instance.

2. The radii of the surfaces of a lens are r and r', D and d are the distances of a luminous point and its conjugate focus from the lens, and μ is the index of refraction, prove

$$\frac{1}{d} - \frac{1}{D} = (\mu - 1)\left(\frac{1}{r} - \frac{1}{r'}\right)$$

State the rule of signs by which this formula is adapted to all lenses.

(a) Find the principal focus of a double-convex lens of glass of equal curvatures.

3. Explain and prove the principle of Hadley's Sextant.

4. Draw two diagrams representing the Earth as seen from the Sun, at the Summer and Winter solstices (noon at London), and explain thus, in part, the difference of these two seasons.

5. Explain the cause of the August meteors.

6. Describe and account for the Trade-winds.

7. State the laws of Reflection, and shew that the image of an object seen in a plane mirror is as far behind the mirror as the object is in front of it.

Let the object be a bright point. Draw the pencil of rays by which an eye sees it.

8. Describe Newton's experiment with a prism, and give his explanation of the phenomena observed.

Find the deviation produced by a prism of small angle.

9. An object 3 inches high is placed at a distance of 12 inches from a convex lens of focal length 16 inches. Determine the nature, position, and magnitude of the image.

10. Explain the terms *ecliptic*, *perihelion*, *first point of Aries*, *tropical year*. A tropical year contains 365¼ solar days nearly; shew that it contains nearly 366¼ sidereal days.

11. Why is it warmer in summer than in winter? In the planet Jupiter the angle between the equator and the ecliptic is about one-eighth of that in the case of earth. Describe what Jupiter's reasons would be if he were, in other respects, like the earth.

12. Explain the phases of the Moon.

If the moon is about a week old at sunset on March 22, where must she be looked for, and what will she look like? Give reasons for your answers.

B. A. ORDINARY EXAMINATION.

MECHANICS—HYDROSTATICS [illegible]

WEDNESDAY, APRIL 8TH:—MORNING, 9 TO 12.

Examiners,..... { ALEX. JOHNSON, M.A., LL.D. / JOHN COX, M.A. / A. H. WALTERS, B.A.

1. A force is applied in *any* direction to support a heavy body on an inclined plane; find the ratio of the Power to the Resistance.

(*a*) A weight 15 lbs. is supported on an inclined plane (angle $= 30°$) by a weight of 10 lbs. attached to a string passing over a smooth pulley vertically above the plane. Find the angle between the string and the inclined plane.

2. Apply the principle of constancy of work done to find the ratio of the power to the resistance in the case of the screw.

3. Assuming the formula for the "value of the centrifugal force," prove that in the case of the rotating Earth the part of this force employed in diminishing gravity varies as the square of the cosine of the latitude.

(*a*.) Calculate what the weight of 1000 tons in latitude $45°$ would be if there were no rotation, assuming that the acceleration due to the "centrifugal force" at the Equator is .11126, the units of space and time being a foot and a second respectively.

4. A bent tube, such as is used in proving Boyle & Marriotte's Law, has mercury in both branches. The shorter branch is closed; it contains a column of air 10 inches long; 12 lbs. of mercury (assume a cubic inch to weigh half a pound) are poured slowly into the longer branch; find the length of the column of air in the shorter, assuming the sectional area of the tube to be $\frac{1}{3}$ of a square inch, the barometer standing at 30 inches.

5. Describe and explain the action of the pipette.

6. Find the magnitude of the force which causes the flow of liquid in a siphon.

7. Define the terms *Momentum*, *Energy*. Which has the greater *momentum* and which the greater *energy*, a one-ounce bullet moving 1600 feet per second, or a 10,000 ton ironclad moving an inch per second? Find the forces which will stop the latter (1) in one minute, (2) in one foot.

8. Find formulæ for the velocity of a falling body (1) in terms of the time of fall, (2) in terms of the space fallen through, assuming the acceleration due to gravity to be 32 feet per second, per second.

Shew that a man who jumps off a tower 121 feet high will be going 60 miles an hour at the bottom.

9. A ship sails due north at 8 knots an hour, and a steamer is making 16 knots an hour on a course 30° north of East. How will the steamer appear to sail, as seen from the ship?

10. Prove in any manner the principle of the lever acted on by parallel forces.

A body placed in one scale of a false balance appears to weigh 5,000 grains; but if placed in the other, only 4,802 grains. Find the true weight and the ratio of the arms of the balance.

11. Describe and explain the action of the mercurial barometer. What precautions would you use in making an observation?

12. State the laws connecting the change of volume of a gas with change of (1) temperature, (2) pressure.

A quantity of air is enclosed in a sealed tube at freezing point under a pressure of 15 lbs. on the square inch. What will be its pressure when raised to the boiling point?

B. A. ORDINARY EXAMINATION.

ASTRONOMY—OPTICS.

FRIDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiners,..... ALEX. JOHNSON, M.A., LL.D.
JOHN COX, M.A.
A. H. WALTERS, B.A.

[*Write the answers on separate sets of papers, headed A and B respectively, to correspond to the questions.*]

A

1. Prove that for objects within 80° of the zenith, the correction for refraction is proportional to the tangent of the zenith distance.

2. The greatest and least diameters of Venus are 28.″5 and 4.″7; calculate its distance from the Sun, that of the Earth being 92,250,000 miles.

3. Explain (illustrating by diagrams) the cause of the relative lengths of day and night at (1) the Equator, (2) the Poles, (3) lat. 66° 32′, (4) a latitude less than 66° 32′.

4. Define *dispersive power*. If it be .022 for a fluor spar $\mu = 1{\cdot}434$, find the dispersion produced by a prism of this substance having an angle of 6° 17′.

5. Find the focal length of a water lens which will achromatize a lens of fluor spar of 10 inch focal length, the dispersive power of water being .035. Prove any formula employed.

6. Find the magnifying power of a pocket lens of focal length f for a person whose distance of distinct vision is d.

(a). If the focal length be $1\frac{1}{2}$ inches, compare the magnifying powers for two persons whose distances of distinct vision are 10 inches and $5\frac{1}{2}$ inches respectively.

B

7. State the laws of Refraction, including the law connecting the indices of refraction of three different substances.

Find the image formed by a glass sphere (radius 1 inch, index of refraction $\frac{3}{2}$) of a bright point placed 4 inches from its centre.

8. Find the focal length of a convex lens of glass, having given the radii of the surfaces.

The radii of a double-convex glass lens are 8 and 12 inches. If the incident focus be 24 inches from the lens, find the conjugate focus.

9. Describe the Astronomical Telescope, tracing a pencil of rays through it. Find an expression for its magnifying power.

10. State Kepler's Laws.

Give an account of how the masses of the Sun and Moon are compared with the mass of the Earth.

11. Mention any reasons why a clock showing mean solar time does not generally agree with a sun dial.

12. A star has R. A. 270°, Declination 45°.; in what part of the sky should it be looked for at Midsummer midnight, Montreal?

HONOUR EXAMINATIONS IN MATHEMATICS.

FIRST YEAR.

GEOMETRY (*First Paper*).

FRIDAY, APRIL 17TH:—MORNING—9 TO 12.

Examiner,.....ALEXANDER JOHNSON, M.A., LL.D.

1. In a given circle inscribe a triangle whose sides shall pass through three given points.

2. Given the vertical angle, the perpendicular on the base, and the sum of the two sides; construct the triangle.

3. Find the locus of a point such that if straight lines be drawn through it, cutting a given circle, the rectangle under the intercepts between the point and the circle shall be constant.

4. Describe a circle touching a given circle and a given straight line at a given point.

5. The perpendiculars from the middle points of the base of a triangle on the bisectors of the internal and external vertical angles cut off from the two sides parts equal to half the sum or half the difference of the sides.

6. Straight lines are drawn from a given point to a given indefinite straight, and cut in a given ratio, find the locus of the points of section.

7. Inscribe in a given triangle a parallelogram of given area not exceeding half the given triangle.

8. If D_1, D_2, D_3, D_4, denote the distances of the centre of the circumscribed circle (radius $= R$) of any triangle from the centres of the four circles touching the sides, prove

$$D_1^2 + D_2^2 + D_3^2 + D_4^2 = 12\ R^2$$

9. The radius of the circle passing through the feet of the perpendiculars of any triangle is half the radius of the circle circumscribing the triangle.

10. If two triangles be on equal bases and between the same parallels, the two sides of each triangle intercept equal segments on any straight lines parallel to the bases.

HONOUR EXAMINATIONS IN MATHEMATICS.

FIRST YEAR.

GEOMETRY (*Second Paper*).

TUESDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. By *reciprocating* the theorem that the three perpendiculars of a triangle are concurrent, prove that if any point be joined to the vertices of a triangle, and perpendiculars drawn to those joining lines, they will meet the sides opposite to the corresponding vertices in three points in the same straight line.

2. The difference of the squares of the tangents from any point to two circles is equal to double the rectangle under the perpendicular let fall from the point on their radical axis and the line joining their centres.

3. Through a given point within a given circle, a transversal is drawn and a point taken on it, such that the reciprocal of its distance from the given point is equal to the difference of the reciprocals of the intercepts between the given point and the circle; find the locus of the point of section.

4. If a transversal cut the sides of a triangle, the segments of any side are in a ratio compounded of the ratios of the segments of the other sides.

5. If through a fixed point two transversals be drawn intersecting two given straight lines, and if the points of intersection be joined transversely, find the locus of the intersection of the joining lines.

6. Given six points on the circumference of a circle; find a seventh point on the circumference such that the anharmonic ratio of it and three of the points taken in an assigned order shall be equal to the anharmonic of it and the other three points taken in an assigned order.

7. Describe a circle such that the radical axes of it and each of three given circles shall pass respectively through three given points.

8. If a line be drawn through a centre of similitude of two circles intersecting the circle, the rectangle under the distances of either pair of non-corresponding points from the centre of similitude is constant.

9. If two variable circles touch two given circles, their radical axes will always pass through the external centre of similitude of the given circles when the contacts are both of the same kind.

10. The anharmonic ratio of four points in a straight line is equal to that of the pencil formed by their four polars.

11. Any two points subtend at the centre of a circle an angle equal to that between their polars.

12. A line drawn from any point outside a circle is cut harmonically by the circle and the polar of the point.

HONOUR EXAMINATIONS IN MATHEMATICS.

FIRST YEAR.

THEORY OF EQUATIONS—ALGEBRA.

FRIDAY, APRIL 24TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, M.A., LL.D.

1. If in the polynomial

$$a_0 x^n + a_1 x^{n-1} + \&c + a_{n-1} x + a_n$$

if the value $\dfrac{a_n}{a_n + a_k}$ or any smaller value, be substituted for x, where

a_k is the greatest coefficient exclusive of a_n, the term a_n will be numerically greater than the sum of all the others.

2. Trace the trinomial function $2x^2 + x - 6$.

3. Every equation of an odd degree has at least one real root of a sign opposite to that of its last term.

4. The roots of the equation

$$x^3 - 9x^2 + 23x - 15 = 0$$

are in arithmetical progression; find them.

5. Employing a process which, while altering the roots of the equation in a known manner, leaves the coefficient of the highest power unity, remove the fractional coefficients of the equation

$$x^4 - \tfrac{5}{6}x^3 + \tfrac{5}{12}x^2 - \tfrac{13}{900} = 0$$

6. If α, β, γ be the roots of the cubic

$$x^3 - px^2 + qx - r = 0$$

form the equation whose roots are

$$\beta\gamma + \frac{1}{\alpha},\ \gamma\alpha + \frac{1}{\beta},\ \alpha\beta + \frac{1}{\gamma}.$$

7. If in any equation each negative coefficient be taken positively, and divided by the sum of all the positive coefficients which precede it, the greatest quotient thus formed increased by unity is a superior limit of the positive roots.

8. Find the number and position of the real roots of the equation

$$x^4 - 2x^3 - 3x^2 + 10x - 4 = 0.$$

9. Find the number of arrangements that can be made out of the letters of the word *institutions*.

10. Prove the Binomial Theorem when the index is a positive fraction.

11. Find by the method of Indeterminate Coefficients the sum of the series $1.2 + 2.3 + 3.4 + \&c + n(n+1)$.

12. Resolve $\dfrac{23x - 11x^2}{(2x-1)(9-x^2)}$ into partial fractions.

HONOUR EXAMINATIONS IN MATHEMATICS.

SECOND YEAR.

PLANE AND SPHERICAL TRIGONOMETRY.

FRIDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, M.A., LL.D.

1. Prove that when n is *negative*

$$(\cos A + \sqrt{-1}\sin A)^n = \cos nA + \sqrt{-1}\sin^n A$$

2. Investigate a general formula for the expansion of $\cos nA$ in terms of the sines and cosines of A, and thence deduce that

$$\cos 6A = \cos^6 A - 15\cos^4 A \sin^2 A + 15\cos^3 A \sin^4 A - \sin^6 A$$

3. Prove $\sin A = A - \frac{A^3}{1.2.3.} - \frac{A^5}{1.2.3.4.5.}$ — etc.

4. Prove $a = \tan a - \frac{1}{3}\tan^3 a - \frac{1}{5}\tan^5$.

5. Define *hyperbolic* sines and cosines, and prove

$$\cos h\, 2x = 1 + 2\sin h^2 x$$

6. Sum the series

$$\sin a + \sin(a+\delta) + \sin(a+2\delta) \text{ etc.}$$

7. In any spherical triangle prove

(*a*) $\cos a = \cos b \cos c + \sin b \sin c \cos A$

(*b*) $\sin \frac{1}{2}A = \sqrt{\frac{\sin(s-b)\sin(s-c)}{\sin b \sin c}}$

8. State Napier's rules for the solution of right-angled triangles.

In a right-angled triangle prove

$$\sin^2 A + \sin^2 b - \sin^2 c = \sin^2 a \sin^2 b$$

9. The three angles of a spherical triangle are $A = 161^\circ\ 22'\ 10''$, $B = 26^\circ\ 58'\ 46''$, $C = 39^\circ\ 45'\ 10''$, find the side a.

10. In a right-angled spherical triangle given $c = 69^\circ\ 25'\ 11''$, $A = 54^\circ\ 54'\ 22''$, find a, C being the right angle.

11. If two spherical triangles ABC, $A'B'C'$ be such that the latter is the polar of the former, the former is the polar of the latter.

12. Prove $\tan \frac{1}{2}(A+B) = \frac{\cos \frac{1}{2}(a-b)}{\cos \frac{1}{2}(a+b)} \cot \frac{1}{2} b$.

HONOUR EXAMINATIONS IN MATHEMATICS.

SECOND YEAR.

ANALYTIC GEOMETRY.

TUESDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Taking the general equation of the conic, prove that if though any point two real lines can be drawn to meet the curve at infinity parallel lines through any other point will meet the curve at infinity.

2. Using the general equation find the locus of the middle points of the chords of a conic parallel to the line $y = mx$.

3. The squares of the ordinates of any diameter of a conic are proportioned to the rectangles under the segments which they make on the diameter.

4. Find the condition that the line $lx + my = 1$ should touch

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

5. The sum of the squares of any pair of conjugate diameters of an ellipse is constant.

6. In the ellipse the rectangle under the focal perpendiculars on the tangent is constant, and equal to the square of the semi-axis minor.

7. Given any two points A and B, and their polars with respect to a circle whose centre is O; let fall a perpendicular AP from A on the polar of B, and a perpendicular BQ from B on the polar of A prove $\frac{OA}{AP} = \frac{OB}{BQ}$

8. Given the base and vertical angle of a triangle, find the locus of the intersection of the perpendiculars.

9. Find the equation of the polar of the point $x_1\ y_1$ with regard to a curve of the second degree given by the general equation.

10. Find the equation of the circle which touches the axes at distances from the origin $= a$.

11. Given n fixed right lines and a fixed point O; if through this point any radius vector be drawn meeting the right lines in the points $r_1\ r_2\ r_3$, etc., and on this a point R be taken such that

$$\frac{n}{OR} = \frac{1}{Or_1} + \frac{1}{Or_2} + \frac{1}{Or_3} \text{ \&c}$$

find the locus of R.

12. Given the coordinates of the vertices of a triangle $a_1\ b_1$, $a_2\ b_2$, $a_3\ b_3$ form the equations of the perpendiculars on the sides of the triangle and show that they meet in a point.

HONOUR EXAMINATIONS IN MATHEMATICS.

SECOND YEAR.

CALCULUS.

THURSDAY, APRIL 23RD:—9 to 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove the rule for differentiating the product of two functions, viz: Multiply each of the factors by the differential co-efficient of the other, and add the products thus found.

2. If $u = \phi(y)$ $y = f(x)$ prove

$$\frac{du}{dx} = \left(\frac{du}{dy}\ \frac{dy}{dx}\right)$$

Given $u = (1 + x^2)^{\frac{1}{2}}$ find $\frac{du}{dx}$

3. Investigate the differential coefficients of $\sin x$, $\tan x$, $\log_a x$.

4. Find the differential coefficients in the following cases:

$$y = \sin^{-1}(x^n),\ y = \log(\sin x),\ y = \sin^{-1}\frac{x}{\sqrt{1 - x^2}}$$

5. Differentiate

$$y = e^{ax}\sin r\,x;\ y = \frac{1 - x}{\sqrt{1 + x^2}};\ y = \log(\log x)$$

6. Find $\frac{d^3y}{dx^3}$ when $y = \log(\sin x)$

7. State and prove Taylor's Theorem.

8. Prove Leibnitz's Theorem.

$$\frac{d^n(uv)}{dx^n} = u\frac{d^nv}{dx^n} + n\frac{du}{dx}\frac{d^{n-1}v}{dx^{n-1}} + \frac{n(n-1)}{1\ .\ 2}\frac{d^2u}{dx^2}\frac{d^{n-2}v}{dx^{n-2}} + \&c.$$

9. Find by MacLaurin's Theorem the first three terms in the expansion of $\tan x$

10. Find the following integrals:

$$\int\frac{\sin^3\theta\ d\theta}{\cos^5\theta};\ \int\frac{dx}{x^2 + 6x + 8};$$

$$\int\frac{dx}{1 + x^3};\ \int\frac{(x - 1)\,dx}{(x - 3)(x + 1)};\ \int\frac{x^3\,dx}{\sqrt{1 - x^2}};\ \int\frac{\sin x\,dx}{a + b\cos x}$$

$$\int\tan x\,dx.$$

11. Find a formula of reduction for $\int \sin^m \theta \cos^n \theta \, d\theta$ when m and n are both positive

(*a*) Find $\int \cos^6 \theta \, d\theta$

12. Find the value of

$$\int_0^a \frac{dx}{a^2 + x^2}$$

HONOUR EXAMINATIONS IN NATURAL PHILOSOPHY.

STATICS.

WEDNESDAY, APRIL 15TH:—MORNING, 9 TO 12.

Examiner,..... .....ALEXANDER JOHNSON, M.A., LL.D.

1. Investigate the equation of the catenary of uniform strength,

$$y = \log \sec \frac{x}{a}$$

2. State the theorems of Pappus concerning the centroid, and thence deduce the volume and surface of a right cone.

3. Find the centroid of a spherical triangle.

4. A cylinder is supported on a rough inclined plane by a string coiled round it in a direction perpendicular to its axis, the string passing over a smooth pulley and sustaining a weight. Find the limits to the direction of the string.

5. State the principle of *Virtual Work*, and apply it in the following instance:—A heavy beam AB rests against a smooth horizontal plane CA, and a smooth vertical wall CB, the lower extremity A being attached by a cord which passes over a smooth pulley at C, and sustains a given weight P; find the position of equilibrium and the pressures on the plane and wall.

6. The sum of the moments of a system of coplanar forces about any point O is equal to the sum of their moments about any other point O', plus the moment about O of their resultant of translation, supposed acting at O'.

7. Two smooth heavy rings slide on two rods which are inclined to the horizon at angles i and i', a string connecting the two rings passes through another smooth heavy ring; find the condition of equilibrium.

8. Prove that the curve along which a series of iron filings would arrange themselves in a plane under the influence of a fixed magnet is the locus of the vertex of a triangle of which the given magnet is the base, and the sum of the cosines of the base angles is given.

9. A mass of fluid is at rest under the action of given forces (X, Y, Z, being the component acting on the unit of mass); prove that if p be the pressure at any given point, and ρ the density

$$dp = \rho\,(X\,dx + Y\,dy + Z\,dz)$$

(*a*) If there be no external pressure, the fluid be incompressible, its volume given and the components be proportional to hx, ky, lz, find the equation of the free surface.

10. A quadrant of a circle is just immersed in a heavy homogeneous fluid, with one edge in the surface; find the centre of pressure.

(*a*) Find it also if the density vary as the depth.

11. Investigate an equation for determining the difference of heights of two stations by barometric observations, the temperatures being given and gravity being considered constant.

12. Define *potential*, *equipotential surface*, *line of force*, *tube of force*. Prove that lines of force are at right angles to equipotential surfaces.

13. If, from a given point O, lines be drawn to the boundary of the elementary area (dS) of any closed surface, and if γ be the angle between the normal (drawn towards the interior) to this element and the radius rector r: prove $\int\int \frac{\cos\gamma\,.\,dS}{r^2}$ all over the surface is 4π or 2π or 0, according as the point is inside the surface or on it, or outside it.

(*a*) Given any attracting mass (the law of attraction being that of nature) *outside* of any closed surface, prove that if the integral be taken of the normal component of the attraction on a unit mass at each point of the surface, the sum will be zero.

14. Define a *magnetic shell*; *magnetic strength* of the shell. Prove that the *potential* of a magnetic shell at a point is equal to the magnetic strength of the shell multiplied by the solid angle subtended by the shell at the point. Explain the importance of this theorem.

(*a*) A current of 5 amperes is flowing round a circular ring of 10 centimetres radius; find (1) its *potential* upon a magnetic pole of strength m, placed on the axis at a distance of 6 centimetres from the centre of the ring, (2) the *strength of the magnetic field* at the same point.

HONOUR EXAMINATIONS IN NATURAL PHILOSOPHY.

THIRD YEAR.

DYNAMICS.

TUESDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiner,..... ALEX. JOHNSON, LL.D.

1. A particle is constrained to move in a logarithmic spiral ($r=ce^{k\theta}$) and is attracted to the pole of the spiral by a force varying inversely as the square of the distance. If the particle start from rest at the distance a from the pole, find the time of describing any portion of the curve.

2. If a particle perform small oscillatory motions about the lowest point on a sphere, investigate its motion to an approximation of the second order.

3. A body is describing an ellipse under the action of a force in one of the foci, prove : 1°, that the force varies inversely as the square of the radius ; 2°, that the velocity at any distance r is given by the equation

$$v^2=2\mu\left(\frac{1}{r}-\frac{1}{a}\right)$$

4. Prove that the velocity at any point in a central orbit is the same as that acquired in moving from rest along one-fourth of the chord of curvature at the point, under the action of a constant force, equal in intensity to that of the central force at the point.

5. A body whose weight is W is attached to the end of an elastic string which hangs freely from a fixed point ; if b be the extension of the string due to W, and if the body be drawn down, the extension c thus caused being less than $2b$, prove that if the body be then let go, the subsequent motion is one of oscillation whose period is $\pi\sqrt{\frac{b}{g}}$.

6. Two spheres, each one foot in diameter, and of the same nature as the Earth, are so placed that they are distant from one another a quarter of an inch ; find the time that under the general law of attraction they would take to come together.

7. A uniform circular plate of 1 foot radius and 1 cwt. revolves round its axis 5 times per second ; calculate its kinetic energy in foot-pounds.

8. Prove that the axes of suspension and of oscillation of a compound pendulum are interchangeable.

9. A free rigid body is acted on by external forces, prove that the total work done by the external forces during any motion is equal to the corresponding change of the kinetic energy of the body.

10. A body m sliding on a perfectly smooth horizontal table is connected by a string passing through a smooth hole in the table, with another body m' which hangs freely; find the condition that m' should remain at rest, and also the time of revolution of m in its circular path of radius a.

11. Find the expression for the *vis viva* lost in the direct collision of two imperfectly elastic spheres.

12. Prove that any simple *harmonic motion* is equivalent to two circular vibrations, in opposite directions.

HONOUR EXAMINATIONS IN NATURAL PHILOSOPHY.

THIRD YEAR.

ASTRONOMY.

THURSDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Having a Nautical Almanac and a chronometer regulated to Greenwich mean time, how would you find at a given time the exact longitude and latitude of the place at which the sun is then vertical?

2. Investigate a method for finding the latitude at sea by two observations of the altitude of the sun and the time between, making allowance for the change of the ship's place during the interval.

Prove that if z' be the zenith distance at the first observation, d the distance in nautical miles travelled by the ship, θ the difference of the Sun's azimuth and the ship's course, and z the corrected zenith distance,

$z = z' - d\cos\theta + \frac{1}{2}d^2 \sin 1'' \cot z' \sin^2\theta$ approximately.

3. Explain fully Sumner's method of finding a ship's place at sea.

4. Give Flamstead's method for determining the position of the first point of Aries.

5. Explain the mode of determining the obliquity of the ecliptic by observations of the Sun at the solstices, and prove the truth of the following correction for the Sun's change of declination

$$x = \tan^2\frac{a}{2}\sin 2\delta + \frac{1}{2}\tan^4\frac{a}{2}\sin 4\delta + \text{etc.}$$

6. Prove the following relation between the true and the excentric anomalies

$$\tan\frac{\theta}{2} = \sqrt{\frac{1+e}{1-e}}\tan\frac{u}{2}$$

7. Prove that the equation of time vanishes four times in the year.

8. Find the time of year when twilight is shortest at a given place.

9. Find a formula for determining the Sun's azimuth at a given time of a given day.

10. If ϕ and ϕ' be the geographical and geocentric latitudes, respectively, of a place, prove that approximately

$$\phi - \phi' = \frac{a - b}{a} \sin 2\varphi$$

when a and b are the equatorial and polar radii of the earth.

11. Find when Venus appears brightest.

12. Prove that the area of the illuminated disc of the Moon varies as the versed sine of the exterior angle of elongation.

B.A. AND THIRD YEAR EXAMINATIONS.

EXPERIMENTAL PHYSICS.

MONDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / JOHN COX, M.A.

1. Arrange the following substances in the order of conductivity:—Dry wood, paraffin, charcoal, the human body, oils, water, silk, copper.

2. Describe Faraday's "ice-pail" experiment, explaining clearly how it shows that induced charges are equal in amount to the inducing charge.

3. State the law of resistance of wires conducting a current. If the conductor be divided into two branches, prove that the joint resistance is equal to the product of the two separate resistances divided by their sum.

a. The poles of a battery, whose resistance was .9 ohm., were connected by 100 metres of copper wire, 1 millimetre in diameter, having a resistance of 3 ohms, and a current of $1\frac{1}{2}$ amperes, was found to flow. The poles were then connected in multiple arc by a second copper wire of twice the length and three times the diameter of the first; find the strength of the current then flowing in each of the wires.

4. A soft iron bar is held horizontally near the north pole of a horizontal magnetic needle, and is found to attract it; the bar is then raised into a vertical position, and the pole is repelled; explain this.

5. A coil of insulated wire is connected with a delicate galvanometer; a magnet is thrust quickly into the coil, held there a short time, and then

pulled out quickly. State the effects on the galvanometer needle and the directions of the currents indicated. Describe another method for producing the same results.

6. Describe any method for determining the number of vibrations corresponding to a given musical note.

7. What are the respective advantages and disadvantages of a Grove's and a Leclanché's cell? For what purposes may they respectively be most suitably employed? Describe one of them.

Given 60 Grove's cells, each with a resistance of .15 ohms, and E. M. F. 2 volts. How would you arrange them so as to send the strongest current through (1) a small piece of platinum wire with a resistance of .04 ohms; (2) an incandescent lamp with resistance 151 ohms?

In the latter case calculate (1) the current, (2) the Watts developed by the battery, (3) the proportion of the whole power usefully employed in the lamp, (4) the amount of heat produced per minute in the lamp.

8. Explain the principle of the ordinary dynamo-electric machine. What is meant by (1) series-wound, (2) shunt-wound? Would a series machine be more self-regulating when running a set of arc lamps in series, or incandescent lamps in parallel? Give reasons.

9. A current is passed through an ammeter and an electro-motor, while the latter is held still. If it be let go, what changes will be observed in the current?

Why is it economical (1) to run a motor fast with a light load, (2) to supply currents from a distance by means of thick copper leads at high potential?

10. Describe the action of *either*

(*a*) Coulomb's Torsion Balance
or (*b*) The Electrophorus,
or (*c*) A Leyden Jar, or (*d*) Bell's Telephone.

A sphere of 2 centimetres radius, charged with 8 units of positive electricity, is placed 1 metre away from a sphere of 3 centimetres radius charged with 125 units. What is the force between them? And what will it be after they have been connected for a moment by a fine platinum wire?

11. Explain the physical causes of the *pitch* and *quality* of musical notes.

12. What is a *node* (1) in a vibrating string, (2) in an organ pipe?

Either (*a*) State the manner in which the speed of vibration of a string depends on its length, tension, etc.

or (*b*) Shew that when a pipe is sounding its fundamental note the length of the waves emitted is four times the length of the pipe, if stopped, and twice the length if open. Draw the nodes and loops for one complete wave in each case.

Practical Work.

(*Additional credit may be gained for this question, which is not, however, necessary.*)

13. (*a*) Explain the principle of Wheatstone's Bridge. Give a brief description of the Post Office Resistance Box and Reflecting Galvanometer, and your method of using them to measure a resistance.

(*b*) How is the constant of a Tangent Galvanometer determined by copper-deposit?

ENGLISH LANGUAGE AND LITERATURE.

ENGLISH LITERATURE.

FIRST YEAR.

MONDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. (*a*) What testimony does Alfred give concerning the state of learning in England when he came to the throne? What were his aims in promoting a revival of literature? Notice his method as a translator, and illustrate it from his translation of Orosius.

(*b*) Who promoted a revival of literature subsequently? Name writers and works which were the outcome of that revival.

2. Trace the development of the Arthur-saga in literature previous to Malory, *or* write on the general allegory of Tennyson's *Idylls of the King* and the particular allegory of *Gareth and Lynette*.

3. Distinguish between the three leading dialects of Early English. Apart from saga-literature, classify such authors and works between the Norman Conquest and Chaucer as were noticed in the lectures. State the language in which each work is written, and, when you can, the dialects of those written in English.

4. (*a*) Make general remarks on the four great poets of our Literature. (*b*) Notice, as precisely as you can, Chaucer's indebtedness to Italian literature in his minor works. (*c*) What was Chaucer's first plan in regard to the Canterbury tales? (*d*) How was it modified subsequently? (*e*) How are the tales classified and on what grounds is the classification made? (*f*) Show in detail that the various classes of English society are to be found in Chaucer's pilgrims.

5. Give an account of the English Chaucerians noticed in the lectures.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE :—*Spalding.*

MONDAY, 6TH APRIL :—MORNING, 9 TO 12.

Examiners, ... { CHAS. E. MOYSE, B.A.
REV. PROF. MACADAM.
P. T. LAFLEUR, M.A.

(N.B.—Answers to A and B are to be written on separate bundles of paper.)

(A)

1. Explain in outline and prove the effects produced on English literature in general by the great political disturbances of the seventeenth century.

2. Name the author and give the approximate date of:—Novum Organum, Anatomy of Melancholy, Defense of Poesy, Tractate on Education, Euphues, Leviathan. Give some account of the first and the last.

3. Give the name of three dramatic writers anterior to Shakspere, and three subsequent to him; with one well-known play of each. Note also the special literary and dramatic characteristics of any one.

4. Name the three greatest theological writers between 1550 and 1650; give the title of the principal work of each; and state briefly its general drift and purpose.

(B)

5. Give a brief account of the works of Spenser and Milton. Characterize the poetic genius of the two men.

6. Name the authors of Polyolbion, Essay concerning Human Understanding, Complete Angler, Hudibras, Robinson Crusoe, Theory of Vision. Write brief notes on each.

7. Name the works of Pope, and indicate the nature of the most important of them. Estimate the excellences and defects of his verse.

8. Give a full account of Addison's influence on English prose. Compare his style with Johnson's. Write notes on some of his contemporaries in popular literature.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE:—*The leading poets of the Nineteenth Century.*

MONDAY, APRIL 24TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

[Only *eight* questions are to be answered. Quote, when you can.]

1. Write on the literature and the history noticed in connection with the *immediate* causes of the French Revolution.

2. (*a*) Describe the attitude of Wordsworth towards Cambridge as set forth in the Prelude.

(*b*) Are the leading characters in the *Excursion* real or fictitious? Give a brief outline of the poem, and write on its purpose.

(*c*) Mention one essential idea which rules Wordsworth's poetical treatment of nature.

3. (*a*) Mention the plays of Coleridge, and write briefly on the nature of one of them, without describing its plot. (*b*) Give some account of *Christabel* OR of the *Rime of the Ancient Mariner*.

4. What was said concerning the *Ballads* of Southey and his *Vision of Judgment?* Give some account of the story of *Thalaba* OR of *Madoc*.

5. Write on the characteristics of Scott as a poet.

6. (*a*) Indicate Byron's place in our literature, and also his leading function as a poet. (*b*) Write on *Manfred* OR *Cain*.

7. What is noteworthy regarding Keats as a poet, apart from the form and the vocabulary of his poetry. Refer to his works in illustration of your statements.

8. In regard to Shelley, point out

(*a*) the effect of his early training on his poetry,

(*b*) the two crises of his early life.

(*c*) the meaning of *Alastor*.

9. Tennyson's *In Memoriam*: (*a*) With what other monodies is *In Memoriam* compared? (*b*) Show the futility of such comparison in regard to interpretation. (*c*) What poem of Robert Browning should be read with *In Memoriam*, and why? (*d*) Mention the leading theme of *In Memoriam*. (*e*) Give the three leading divisions of *In Memoriam* and indicate its general structure.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE:—*A Midsummer Night's Dream.*

MONDAY, 6TH APRIL :—2 P.M.

Examiners,..... { CHAS. E. MOYSE, B.A
P. T. LAFLEUR, M.A.

1. "The principal human interest in this play is to be found in the character of Bottom." Discuss this statement.

2. Write a short sketch of the character of Puck, introducing quotations from the text in support of your remarks.

3. Relate *in outline* the events contained in Act I or Act III.

4. Name the principal supposed allusions to events contemporaneous with the play.

5. Make short notes on:—Endure the livery of a nun, collied night to do observance to a morn of May, hold or cut bowstrings, reremice, russet-patted choughs, you spend your passion in a mispris'd mood, give me your neif.

COMPOSITION.

Write an essay of at least two pages on any one of the following subjects :—

A. The True Ideal of National Glory.
B. A Military Hero.
C. Chivalry.

INTERMEDIATE EXAMINATION.

ENGLISH AND CANADIAN HISTORY.

SATURDAY, APRIL 18TH :—MORNING, 9 TO 11.30.

Examiners,..... { CHAS. E. MOYSE, B.A.
REV. PROF. MACADAM, M.A.

[N.B.—Students will answer the following pairs of groups of questions, namely, A and B *or* A and C, but *not* B and C.]

A

1. Make brief notes on the Treaty of Wedmore; the earldoms and the army of Cnut; Stephen Langton; the battle of Shrewsbury; Sir Thomas Wyat.

2. Indicate the tenor of the Act of Succession (Henry VIII), the Act of Settlement, the Statute of Kilkenny, the Statute of Mortmain.

3. Give an outline of the reign of Richard II.

B

1. Write on Walpole, Wilkes, Algernon Sidney, Sir Harry Vane, Lambert Simnel, Judge Jeffreys.

2. Give an account of the progress of the English in India during the reigns of George II and George III.

3. State in three columns, in tabular form, and refer to the reigns in which they happened, the most important dealings of England with Wales, Ireland and Spain, and mention, with precision, one event connected with each.

C

1. Give an outline of Canadian history during the Governorship of De Frontenac.

2. Mention events connected with the following places: Haverhill, Louisburg, Ticonderoga, Fort Necessity, Fort William Henry.

3. Notice important events connected with the internal administration of Canada between 1763 and 1812.

THIRD YEAR.

CHAUCER AND RHETORIC.

MONDAY, APRIL 9TH:—AFTERNOON, 2 TO 6.

Examiners, ... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, M.A.

(Write the answers to A and B on separate bundles of paper.)

A.—CHAUCER.

1. Refer the following extracts to the pilgrims, and scan the complete lines:

(*a*) Of nyce conscience took he no keep

(*b*) That on his schyne a mormal hadde he

(*c*) And of his port as meke as is a mayde

(*d*) by nightertale
He sleep no more than doth a nightyngale.

(*e*) But sikerly sche hadde a fair forheed

(*f*) But al be that he was a philosophre,
Yet hadde he but litel gold in cofre.

(*g*) And overal, ther as profyt schulde arise
Curteys he was, and lowely of servyse.

(*h*) In a tabard he rood upon a mere

(*i*) He was a lord ful fat and in good poynt

(*j*) Ful wel sche sang the servise divyne

(*k*) A fairer burgeys was ther noon in Chepe

(*l*) Y-lik a staf, ther was no calfy-sene

(*m*) A garland hadde he set upon his heed
A gret as it were for an ale-stake.

(*n*) Bold was her face and fair and reed of hewe

(*o*) A vernicle hadde he sowed upon his cappe

(*p*) By unces hynge his lokkes that he hadde

2. Give the modern English (and nothing else) of the following words, and expressions: they were seeke; esed atte beste; made forward; I yow devise; noman ferre; the bord bygonne; mortal batailles; no mane wight of evene lengthe; floytynge; carf; him luste; hire leste; cheere; of court; wastel breed: a peire of bedes; somdel streyte; purfiled with grys; eyen steepe; for-pyned; a ful solempne man; oo schoo; his overeste courtepy; gan preye; high sentence; ther nas; make a thing; by the morwe; al his wone: sondry sesouns; in stewe; table dormant; in chaped nat with bras; his lodemenage; that was skathe; she hadde such an haunt; as nouthe; a thikke knarre; his sleighte and his covyne; sawceflem he was, here reed; a gobet of the seyl.

3. Describe the Mellere and the Maunciple.

4. Give the Chaucerian equivalents of the following: *lord's*, young, *guess*, wonderfully, father, reached, *stately*, one (pronoun), dainty, (I) saw language, *victuals*, *clasped*, plenteous, *gave*, pounds, parishioners, horse, arrears, anywhere, *best of all*.

5. Write notes on the Chaucerian forms of the italicized words of the previous question, and quote lines in which the words of the same question occur.

6. What does the final *e* in Chaucer represent in English and in Romance words? Illustrate from the Prologue, and say precisely where your illustrations are to be found. (No examples from the foregoing questions will receive credit).

B. Rhetoric.

(N.B.—High marks will be given for excellence of diction and style).

1. Explain and illustrate: Synecdoche, Irony, Heroic Couplet, Allegory, Antithesis, Mixed Metaphor, Onomatopœia.

2. Make some notes on the nature and purposes of Parody, and cite examples in point.

3. Contrast Wit and Humour, as they are found in English literature.

4. What are the main conditions of Historical description? State clearly the difference between the Objective and the Subjective description.

5. Classify arguments from the rhetorician's point of view, with a short example for each class.

6. Give the conventional divisions of the Oration; and shew that such order of thought has a logical basis.

7. Assuming that "the Novel is a work of art," discuss the question of the scope and limitations of Fiction.

B A. ORDINARY EXAMINATION.

MODERN HISTORY.

Myers:—*Mediæval and Modern History.*

Bryce:—*Holy Roman Empire.*

Friday, April 17th:—Afternoon, 2 to 5.

Examiners,..... { Chas. E. Moyse, B.A. / Rev. Prof. A. T. Love, B.A.

[Students of Morrin College will answer groups C and D. Students of McGill College will answer group A, and, in addition, not more than *six* questions from groups B, C and D, of which not more than *three* questions are to be taken from group B, and of which at least *two* questions must be taken from group C.]

A. 1. In what connection was reference made in the lectures to the following: Plassey, Jamaica, Frobisher, Tadousac, Michilimackinac, Fort William, Fort Orange, Mr. Buck's church in Virginia, Kalm, the Franco-German war of 1870-71?

2. Write on *one* of the following subjects:—

(*a*) The mediæval idea of a colony, and the mediæval motive which led to colonization.

(*b*) The bearing of geography on English and French colonization in North America and on the course of the Anglo-French duel.

3. Make notes on Tartessos, Pyrrhos, the hills of Rome, the decree of Antoninus Caraçalla, Kallimachos, Polybios, the Rhine as an imperial boundary, the Danube as an imperial boundary, the Patriarchates, the Kingdom of Toulouse, the Franks as champions of the Empire.

B. 1. Write on the following subjects, (*a*) the meaning of the term History, (*b*) the position of History among the sciences, (*c*) an original authority.

2. Sketch the extension of Roman power over Greece and the East, noticing, as you proceed, principles of historical development.

3. (*a*) Show that the change from the Roman Commonwealth to the Roman Empire was not a sudden one.

(*b*) Sketch the administration of the Empire under (*a*) Diocletian, (*b*) Constantine.

4. (*a*) In what relations has the Turk stood to the Saracen? (*b*) Write on the undivided Caliphate, and the succession to the Imamate.

5. Apply such detail as was given in the lectures to leading statements regarding (*a*) the struggle between the Phœnicians and Carthaginians and the Greeks; (*b*) the struggle between Carthage and Rome.

C. Bryce.

1. Mention some points of interest in the history of the last days of the Western Empire.

2. How is the restoration of the Empire by Charles to be accounted for?

3. (*a*) What was the nature of the relationship between Henry IV. and Gregory VII? (*b*) Mention some of the results of the struggle between Empire and Papacy.

4. Give some account of the revival of learning and literature A D. 1100-1400.

5. What was the teaching of Arnold of Brescia, and what influence did it exert on the minds of the Romans?

6. Mention some of the existing relics of the Dark and Middle Ages in Rome.

7. Compare the results of the system of feudality in France, England and Germany.

D. Myers.

1. Mention the circumstances attending the establishment of the Lombards in Italy.

2. State the causes which induced the Scandinavian emigration.

3. Give some account of the Danish conquest of England and its results.

4. Remark on the Tournament, the Mongols, Togrul Beg, Petrarch, John Scotus Erigena, the Troubadours.

5. Make brief notes on the Council of Whitby, the Battle of Nineveh, the Golden Age of the Caliphate, the Donation of Constantine, Ordeal of Barthelemy, the Conquest of Granada.

6. Mention the most noteworthy events of the Capetian period.

ADDITIONAL AND HONOUR EXAMINATIONS.

THIRD YEAR.

Burke, *Reflections;* Macaulay, *Essays on Clive; Ranke's History of the Popes* and *Warren Hastings.*

Monday, March 30th:—Morning, 9.

Examiner,.....Chas. E. Moyse, B.A.

1. Notice references to the Rev. Hugh Peters. What was his fate?

2. To what Acts does Burke appeal in his defence of hereditary succession? Examine their nature, and examine Burke's arguments.

3. State, concisely, arguments mentioned in favour of the confiscation of church property.

4. What does Burke say regarding (*a*) the *real* rights of man, (*b*) the paper currency in England? (*c*) What arguments against taxation are given to the peasants?

5. Mention, in few words, *one* leading fact or argument connected with each of the following: (*a*) the place of Paris in France, (*b*) M. Necker's budget laid before the Orders at Versailles, (*c*) M. de la Tour du Pin's report concerning the army, (*d*) the occupation of a hairdresser or of a working tallow-chandler, (*e*) the "two principles: the spirit of a gentleman and the spirit of religion," *f*) Collins and Toland, (*g*) Mr. Law, (*h*) Oct. 6th, 1789.

6. Make a brief note on each of the following allusions: (*a*) and their heroic deliverer, the Knight of the Sorrowful Countenance; (*b*) the papal deposing power in its meridian fervour of the twelfth century; (*c*) a Levanter; (*d*) Limbus Patrum: (*e*) mais si maladia opiniatria non vult se garire quid illi facere? etc.

7. Contrast the state of India when the English conquered it with that of Mexico when conquered by the Spaniards. Give a probable reason for Englishmen knowing so little about the conquest of India.

8. Write on Surajah Dowlah.

9. Give some account of Ignatius Loyola *or* of the second great rising up of the intellect against the spiritual domination of Rome.

10. "But the Protestant boasts, and boasts most justly, that wealth, civilization and intelligence have increased far more on the northern than on the southern side of the boundary." Illustrate.

11. Give in tabular form, and without entering into any detail whatever, an outline of the career of Warren Hastings in India.

12. Compare the Bengalees with the other peoples of India.

13. Make brief notes on St. Michael, Gheriah, Sulivan, Baron Imhoff, Schitab Roy, Major Scott.

ADDITIONAL AND HONOUR EXAMINATIONS.

THIRD YEAR.

Anglo Saxon: Sweet, Extt. IV., VIII., XXI.; *Early English:* Morris and Skeat, Part II., Extt. I.-IX.

Friday, April 10th:—Morning, 9 to 12.

Examiner,..... ..... Chas. E. Moyse, B.A.

A. Translate:—

(1) Ext. IV., 33-45; 158-171.

Why is ofslóge in the subjunctive? Give the principal parts of the strong verbs in 158-171.

(2) Ext. VIII., 184-194.

(3) Ext. XXI., 25-41; 312-325.

B. 1. Give the i-umlaut of a, á, æ o, ó, u, ú, and illustrate each. Show that umlaut may produce a diphthong.

2. Conjugate in full: feohtan, habban, werian.

3. Give the gender of the following nouns, and decline them: land, dæg, nama. Compare the present meanings of bower, town, dream, fear, with their meanings in Anglo-Saxon.

4. Make notes on the suffixes *a* and *ern*, and on the prefixes *ge* and *or*. Give examples to show the meanings of the following prepositions and the cases they govern:—ymbe, with, mid.

C. Translate:—
Ext. II., 107-116.
IV. (A), 37-45.
VI., 127-147.
IX., 20-35.

ADDITIONAL AND HONOUR EXAMINATIONS.

THIRD YEAR.

HALLAM, *Middle Ages*, Chaps. I. 3, 5.

WEDNESDAY, APRIL 22ND:—MORNING, 9.

Examiner,.....CHAS. E. MOYSE, B.A.

1. (*a*) Give an account of the settlement of the Lombards in Italy and of their overthrow by the Franks.

(*b*) Give an account of the War of the Public Weal.

2. State briefly:—

(*a*) The uniform plan of warfare adopted by the Danes.

(*b*) The leading principle of the Crusades.

(*c*) Why Crecy and Poitiers were won.

(*d*) The leading difference between the troops of Bedford and the French.

e Why Ghent, when defeated, generally procured good terms.

(*f*) The absolute character of Henry III of Germany as seen in his dealings with fiefs.

(*g*) Why the electors did not become absolute superiors.

3. Make notes on the following:—Aversa, Henry the Fowler, Courtray, Alessandria, Marin Falièri, the Great Company, the Pfahlburger and the Ausburger, the Orphans.

4. Write on the constitution of Venice.

5. Sketch the career of Florence from the time of Walter de Brienne to the time of Lorenzo de' Medici.

6. Write on the Kingdoms of Bohemia and Hungary.

THIRD YEAR HONOURS

ANGLO-SAXON.

THURSDAY, APRIL 16TH:—MORNING, 9.

Examiner.....CHAS. E. MOYSE, B.A.

I. Translate the following extracts:

A. *Charms.* With ymbe. Nim eorthan, oferweorp mid thinre swithran handa under thinum swithran fet, and cweth :

'Fo ic under fot; funde ic hit.
Hwæt, eorthe mæg with ealra wihta gehwilce,
and with andan, and with æminde,
and with tha micelan mannes tungan.'
Forweorp ofer greot, thonne hi swirman, and cweth:
'Sitte ge, sigewif, sigath to eorthan!
næfre ge wilde to wuda fleogan!
beo ge swa gemindige mines godes
swa bith manna gehwilc metes and etheles!'

Make brief notes on *funde, æminde, with tha micelan mannes tungan.*

B. *Beowulf* Ofereode tha æthelinga bearn
steap stanhlitho, stige nearwe,
enge anpathas, uncuth gelad,
neowle næssas, nicorhusa fela.
He feara sum beforan gengde
wisra monna wong sceawian,
oth thæt he færinga fyrgenbeamas
ofer harne stan hleonian funde,
wynnleasne wudu; wæter under stod
dreorig and gedrefed. Denum eallum wæs,
winum Scyldinga, weorce on mode,
to getholianne thegne monegum,
oncyth eorla gehwæm, syththan Æscheres
on tham holmclife hafelan metton.

Make notes on *anpathas, nicorhusa, holmclife.*

C. Cædmon 'Me hafath bringa gespong,
slithhearda sal sithes amyrred,
afyrred me min fethe, fet synt gebundene,
handa gehæfte; synt thissa heldora
wegas forworhte; swa ic mid wihte ne mæg
of thissum hothobendum.'

He hæfth nu gemearcod anne middangeard, thær he hæfth monn geworhtne

æfter his onlicnesse, mid tham he wile eft gesettan
heofona rice mid hluttrum saulum. We thæs sculon hycgan georne,
thæt we on Adame, gif we æfre mægen,
and on his eafrum swa some andan gebetan,
onwendan him thær willan sines, gif we hit mægen wihte athencan.

Write on *mid angeard*. Resolve the umlauts *gebetan*, *athencan*,

D. *Judith*. Beornas stodon
ymbe hyra theodnes træf thearle gebylde,
sweorcendferhthe. Hi tha somod ealle
ongunnon cohhetan, cirman hlude,
and gristbitian Gode orfeorme,
mid tothon torn tholigende; tha wæs hyra tires æt ende
eades and ellendæda. Tha eorlas hogedon
aweccan hira winedryhten: him wiht ne speow.
Tha wearth sith and late sum to tham arod
thara beadorinca, thæt he in thæt burgeteld
nithheard nethde, swa hyne nyd fordraf:
funde tha on bedde blacne licgan,
his goldgifan gæstes gesne,
lifes belidenne.

E. *The Phœnix*. Thær ne hægl ne hrim hreosath to foldan,
ne windig wolcen, ne thær wæter fealleth
lyfte gebysgad; ac thær lagustreamas.
wundrum wrættlice wyllan onspringath.
fægrum foldwylmum foldan leccath,
wæter wynsumu of thæs wuda midle,
tha montha gehwam of thære moldan tyrf
brimcald brecath, bearo ealne geondfarath
thragum thrymlice: is thæt theodnes gebód
thætte twelf sithum thæt tirfæste lond
geondlace lagufloda wynn.

F. *The Dream of the Rood*. Hwæthere we thær greotende gode hwile
stodon on stathole; stefn up gewat
hilderinca: hræw colode
fæger feorgbold. Tha us man fyllan ongann
ealle to eorthan: thæt was egeslic wyrd:
Bedealf us man on deopan seathe: hwæthre me thær Dryhtnes thegnas
freondas gefrunon * * *.
gyredon me golde and seolfre.
Nu thu miht gehyran, hæleth min se leofa,
thæt ic bealuwara weorc gebiden hæbbe
sarra sorga.

Give some account of the Vercelli Book.

G. *The Wanderer.*

'Hwær cwom mearg, hwær cwom mago? hwær cwom maththumgyfa?
hwær cwom symbla gesetu? hwær sindon seledreamas?
Eala beorht bune, eala byrnwiga,
eala theodnes thrymm; hu seo thrag gewat,
genap under nihthelm, swa heo no wære:
Stondeth nu on laste leofre duguthe
weall wundrum heah, wyrmlicum fah:
eorlas fornomon æsca thrythe,
wæpen wælgifru, wyrd seo mære
and thas stanhleothu stormas cnyssath;
hrith hreosende hrusan bindeth,
wintres woma, thonne wonn cymeth,
nipeth nihtscua, northan onsendeth
hreo hæglfare hælethum on andan.
Eall is earfothlic eorthan rice,
onwendeth wyrda gesceaft weoruld under heofonum.
Her bith feoh læne, her bith freond læne,
her bith monn læne, her bith mæg læne:
eall this eorthan gesteall idel weortheth.'

H. Cynewulf. *Riddles.* Mec feonda sum feore besnyithede,
woruldstrenga binom; wætte siththan,
dyfde on wætre; dyde eft thonan,
sette on sunnan, thæt ic swithe beleas
hærum tham the ic hæfde. Heard mec siththan
snath seaxes ecg sindrum begrunden,
fingras feoldan, and mec fugles wynn
geond (sprengde) sped lropum, spyrede genæhhe
ofer brunne brerd, beamtelge swealg,
streames dæle, stop eft on mec,
sithade sweartlast. Mec siththan wrah
hæleth hleobordum, hyde bethenede,
gierede mec mid golde; for thon me gliwedon
wrættlic weorc smitha wire bifongen

II. Translate: hæl wes-tu; he tha fag gewat; sweard swatefah swin ofer helme ecgum dyhtig and weard scireth; on hreon mode; uton rathe feran; nalas elnes læt; se geweald hafath sæla and mæla; hehstne to him on heofona rice; forst fyrnum cald; hycgath his ealle; nymthe se modiga hwæne nithe rofra him the near hete rinca to rune gegangan; Nergend ealra woruldbuendra; earn ætes georn; hlæwas ne hlincas; bæron me thær beornas on eaxlum; gestodon him æt his lices heafdum; wyrd bith

ful aræd; nu slithen bith sorg to geferan; winde biwaune weallas stondath; til bith se the his treowe gehealdeth; ic getenge ne beom flode; woum wirbogum; hwilum weras cyssath; se reada telg; lyftfæt leohtlic; dust stonc to heofonum; moththe word fræt; sanges rowe; ellen sceal on earle.

III. Make philological and grammatical remarks on noteworthy form in G.

THIRD YEAR HONOURS.

CHAUCER *Parlament of Fowles;* SIDNEY: *Apologie for Poetrie:* MILTON: *Areopagitica.*

FRIDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner.....CHAS. E. MOYSE, B.A.

1. Nat yore
Agon, it happede me for to beholde
Upon a bok was write with letteris olde.....
Of his centence I wil yow seyn the grete.

Give some account of the book, and follow Chaucer's outline of its contents.

2. Use the *Parlament of Fowles* to illustrate Chaucer's reading. Show that Spenser is indebted to it.

3. "I charge of euery flok that ye on calle
To seyn the verdit for yow foulis alle.

What birds were chosen, and what opinions did they express?

4. Write in modern English: ful faste I redde and yerne; til the day gan mysse; thy sorwe of caste; that on me hette; the cofere unto carayne; sykys hote as fyr; that doth of hunger bote; that orloge is of thorpis lyte; love most entrikyth; the lytil leyser.

5. Mention very briefly the points which Sidney is trying to prove when he makes the following references:

(*a*) Heroes, Demigods, Cyclops, Chimeras, Furies and such like.

(*b*) I am *Lux vita*, *Temporum Magistra*, *Vita memoria*, *Nuncia vetustatis*, etc.

(*c*) *Katholou* and *Kathekaston.*

(*d*) *John a stile* and *John a noakes.*

(*e*) This Alexander tooke deade Homer with him.

(*f*) So voyd of those cumbersome differences of Cases, Genderss, Moodes and Tenses which I thinke was a peece of the Tower of Babilon, curse.

(*g*) *Buono, Suono*; *Femina, Semina.*

(*h*) Let but Sophocles bring you Ajax on a stage.

6. Write Sidney's views concerning (*a*) the definition of Poetry, (*b*) the Unities of the Drama, (*c*) Tragi-comedy.

7. Expand after the manner of Milton :

(*a*) As good almost kill a Man as kill a good book.

(*b*) There is not any burden that som would gladier post off to another then the charge and care of their Religion.

(*c*) Truth indeed came once into the world with her divine Master, and was a perfect shape most glorious to look on.

(*d*) Lords and Commons of England, consider what nation it is wherof ye are and wherof ye are the governours.

8. Explain briefly : him who went about to impaire your merits with a triviall and malignant *Encomium* ; Padre Paolo ; whose volume of natural and national laws ; Sorbonists ; his two controversal faces.

Give the meaning (and nothing else) of insolent; museless; seis'd; excremental whiteness; cautelous; prevented; ingenuity; hears ill; Adam as he is in the motions; punie; ding ; enchiridion ; dividuall ; battell; colours.

9. "But I have first to finish as was propounded, what is to be thought in generall of reading Books, whatever sort they be, and whether be more the benefit or the harm that thence proceeds."

Express in the form of a summary, Milton's arguments on this subject and bracket references as you proceed.

ADDITIONAL AND HONOUR EXAMINATIONS.

THIRD YEAR.

SPENSER : *Faerie Queene*, Bk. I. ; MILTON : *Comus ;* DRYDEN : *Annus Mirabilis* ; *Absalom and Achitophel*, Part I ; Preface to "*Fables.*"

SATURDAY, APRIL 18TH :—AFTERNOON, 2.

Examiner,..... CHAS. E. MOYSE, B.A.

1. What did Spenser say at the meeting described by Bryskett?

2. How does Spenser speak of the following subjects in his Prefatory Letter:—

(*a*) The choice of a hero.
(*b*) The Allegory.
(*c*) The method of a Poet. (Do not give any details.)

3. State without any details (*a*) the localities in which the events described in the first Book take place, (*b*) the occasions on which Una assists the Red Cross Knight. Apply the allegory to (*b*).

4. Give some account of Peele's *Old Wives' Tale*.

5. (*a*) State the allegorical meaning of the Attendant Spirit and of Sabrina, "When they have feared lest their sister should be in danger..... the Elder makes a speech in praise of chastity, and the Younger finds how fine it is to be a philosopher." *Johnson*. Show that the critic fails to perceive the inner meaning of *Comus*.

(*b*) Give the meaning of nether Jove, virgin here distrest, plighted clouds, To tell thee sadly, shepherd — — we lost her, tinsel-slipper'd feet Refer each expression to its place in the poem.

6. Give the substance of the following speeches :—

(*a*) *Comus*. Can any mortal mixture of earth's mould
Breathe such divine enchanting ravishment ?

(*b*) *Spirit* Care and utmost shifts
How to secure the lady from surprisal.
Brought to my mind

7. How does Dryden define *Annus Mirabilis*, and what does he say regarding the measure in which it is written ?

8. In *Annus Mirabilis* notice figures taken from the animal world, and say precisely where those you have noticed occur.

9. Explain the following references and give the connection of each : —

(*a*) Their tail the rudder.
(*b*) Whom sea-green Sirens from the rocks lament.
(*c*) About the fire into a dance they bend.
(*d*) Yet like an English general will I die.
(*e*) And on her shadow rides in floating gold.
(*f*) O truly Royal ! who behold the law
And rule of beings in your Maker's mind
(*g*) loyal all along,
Famed for his action on the Smyrna fleet.
(*h*) But feared the fate of Simois would return.
(*i*) But take Thy judgments from this mourning land.

10. Why does Dryden give *Absalom and Achitophel* a Scriptural cast ? Briefly set forth the plan of the Poem.

11. Describe Zimri *or* Barzillai.

12. Select the chief points in the concluding speech of *Absalom and Achitophel.*

13. Show in what way Dryden contrasts Homer with Virgil, *or* give eferences to English writers other than Chaucer.

THIRD YEAR HONOURS.

ADDISON: *Essays in the Spectator.* LESLIE STEPHEN. *English Thought in the Eighteenth Century.*

MONDAY, APRIL 20TH.—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Consider the works of Nature and Art.

2. *The Fairy Way of Writing*:—define it, mention the author of the phrase, and examine its nature.

3. Write on the following subjects discussed by Addison:

(*a*) The defects which appear in the Fable, the Characters, the Sentiments and the Language of Paradise Lost.

(*b*) The battle of Angels.

4. Write on the Letters of Junius.

5. Give Leslie Stephen's estimate ef Delolme and Tom Paine.

6. Arrange the other writers whose works are examined, under the divisions given, and express *very briefly* a leading doctrine of each and the work in which that doctrine is expressed.

THIRD YEAR HONOURS.

MILTON: *Shorter Poems;* WORDSWORTH: *Prelude.*

TUESDAY, APRIL 21ST:—MORNING, 9.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Give the substance of the following divisions of *L'Allegro* and *Il Penseroso,* using Milton's language when you can:

L'Allegro: Night and the tales told by the social fireside.

Il Penseroso: Il Penseroso solitary. (Thus night oft see me in thy pale career.)

2. Give the contexts of the following extracts, and explain allusions when necessary: Fancy's child; Hebe's cheek; the ear of Pluto; Pluto's cheek; the tale of Troy; solitary Saturn; the Tartar King; the drudging goblin; that starr'd Ethiop queen; in saffron robe, with taper clear.

3. Briefly indicate the construction of *Arcades*, and briefly state what features of the literature of its time are seen in it. Refer the following extracts to their connections:—

(*a*) Of famous Arcady ye are.

(*b*) Such a rural queen
All Arcadia has not seen.

(*c*) Mother of a hundred gods.

Explain these allusions: nine enfolded spheres; Divine Alpheus; Syrinx, Ladon.

4. Describe in your own language, and in general terms, features in the career and the death of Lycidas which Milton has used.

5. Quote the passage, "Fame is the spur that the clear spirit doth raise." Quote also the passage on the flowers for the hearse of Lycidas.

6. Give the substance of Wordsworth's description of the episodes to which the following passages refer:—

(*a*) I struck and struck again
And growing still in stature, the grim shape
Towered up between me and the stars.

(*b*) I made no vows, but vows
Were then made for me: bond unknown to me
Was given, that I should be, else sinning greatly,
A dedicated spirit

(*c*) the downfall of this Tribe
So dreaded, so abhorred. The day deserves
A separate record.

7. Write on *Imagination and Taste, how impaired and restored*, and avoid entering into undue detail concerning any one leading thought. (Quote briefly when you can.)

THIRD YEAR HONOURS.

MACAULAY: *History of England*, Vol. I., chap. I. GREEN: *History of English People. Reigns of Elizabeth and Charles II.*

THURSDAY, APRIL 23RD:—MORNING, 9.

Examiner,..... CHAS E MOYSE, B.A

1. How does Macaulay treat the following subjects?—

(*a*) Britain under the Romans.

(*b*) The peculiar character of the English aristocracy.

(*c*) The arguments of the Royalists and the Puritans in justification of the course of each party.

(*d*) The parliaments and the foreign policy of Cromwell.

2. Write briefly on: (*a*) The policy of Paul the Fourth and Pius the Fifth.

(*b*) The Treaty of Edinburgh.

(*c*) The character and the policy of Catherine of Medicis.

(*d*) The freedom of the press.

3. Give some account of the revolt of the earls in the reign of Elizabeth, and also of the "counter attack on Spain."

4. No such struggle had taken place between the Crown and the Commons since the beginning of the New Monarchy; and the struggle had ended in the virtual defeat of the Crown (1566).

5. Write on the Constitutional Royalists.

6. Point out: (*a*) Clarendon's theory of state and his French policy.

(*b*) Danby's policy in regard to the Parliament and in regard to France.

(*c*) Sir William Temple's plan of administration.

7. Sketch an outline of the war against Holland in the reign of Charles II.

8. Give the tenor of the Act of Uniformity, and notice its political and religious results.

LOGIC, MENTAL AND MORAL PHILOSOPHY.

INTERMEDIATE EXAMINATION.

LOGIC.

FRIDAY, 3RD APRIL:—AFTERNOON, 2 TO 5.

Examiners..... { J. CLARK MURRAY, LL.D. / REV. PROF. MACADAM. / P. T. LAFLEUR, M.A.

(*N. B.—Answers to A and B are to be written on separate bundles of paper.*)

A.

1. Distinguish, with the help of examples, between:—Abstract and Concrete Names, Connotative and non-Connotative Names, Univocal and Equivocal Names. Enumerate the chief causes that bring about Equivocality.

2. Explain the nature and purpose of logical Definition, and give an example of its use.

3. Define Opposition. Give the negative opposites of each of the following :—

a. Every man is expected to do his duty.
b. Food is necessary to animal life.
c. Novelty is a source of pleasure
d. The beautiful and the useful are partially coincident.

4. Use the diagrammatic circles to represent (*a*) and (*d*) in question 3; and shew also that these figures demonstrate clearly the distribution or the non-distribution of the *predicate*.

B.

5. Define Mood and Figure. Test the validity, in each figure, of the following moods, indicating the rules violated by such as are invalid :— IIA, AEE, AOI, AAA.

6. Explain Reduction. Exhibit the process *with sentences* in two forms on Baroko *or* Bokardo.

7. State the rules of the Hypothetic Syllogism. Show, by a verbal example reduced to categorical form, the formal fallacy involved in the breach of either of these rules.

8. Explain the fallacies of Petitio Principii, Ignoratio Elenchi, Composition and Accident. Show that the last involves a formal fallacy.

9. Test the validity of the following syllogisms, remarking carefully upon any peculiarities :—

(*a*) Sweet is light; feathers are light; therefore they are sweet.

(*b*) Some allowance should be made for Jack, for "boys will be boys."

(*c*) No ambitious man would refuse a crown; Cromwell would not take the crown, for he feared the army; therefore Cromwell was not ambitious.

(*d*) The English are a brave people; but a brave people is free, and a free people is happy; so the English must be a happy race.

THIRD YEAR.

MENTAL PHILOSOPHY.

MONDAY, 13TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Describe the order in which the principal cognitions are evolved; *or* explain the tests by which the intellectual rank of the different senses is determined.

2. Contrast the perceptions of Taste with those of Smell in their evolution.

3. Show that Touch gives no perception of absolute dimensions, *or* explain the Auditory Perceptions of space.

4. State the evidence to prove that distance cannot be perceived immediately by Sight.

5. Explain fully either the effect of the Stereoscope, *or* the illusion described in the following passage from *King Lear* :—

> "How dizzy 'tis to cast one's eyes so low!
> The crows and choughs, that wing the midway air,
> Show scarce so gross as beetles.....
> The fishermen that walk upon the beach
> Appear like mice."

6. Explain fully any one of the stages in the process of Generalisation.

7. Distinguish speculative, practical and æsthetic activities of intelligence, and indicate briefly the ideal of each.

8. Describe the various causes of Hallucinations, *or* give some account of Hypnotism.

9. Explain Associationism in Psychology, *or* point out where it fails to explain the facts of intelligence.

10. State objections to any materialistic Theory of Evolution.

THIRD YEAR HONOURS IN MENTAL AND MORAL PHILOSOPHY.

CICERO'S DE OFFICIIS AND GREEK PHILOSOPHY.

FRIDAY, 10TH APRIL :—MORNING, 9 TO 12.

Examiner, ...J. CLARK MURRAY, LL.D.

1. Define *officium*, and distinguish its two kinds.

2. (*a*) What are the three questions which, according to Panaetius, may be proposed in deliberating on action?

(*b*) What two additional questions does Cicero suggest?

(*c*) What parts of *De Officiis* are devoted to these several questions?

3. Explain the distinction between different kinds of *honestum*.

4. Give a brief outline either of the second or of the third Book of *De Officiis*.

5. Sketch briefly the course of Pre-Socratic Philosophy.

6. Give a short account of the teaching of Socrates, *or* of one of the schools of Imperfect Socratics.

7. Sketch the Dialectic of Plato, *or* the Ethics of Aristotle.

8. Sketch the Logic of the Stoics, *or* the Ethics of the Epicureans.

9. Write a note on any two of the following :—Pyrrho, Timon, Arcesilaus, Carneades, Sextus Empiricus.

THIRD YEAR HONOURS.

TUESDAY, 21ST APRIL:—MORNING, 9 TO 12.

Examiner, ...J. CLARK MURRAY, LL.D.

I. *Fraser's Selections from Berkeley.*

1. Give a brief summary of Berkeley's doctrine with regard to the existence of matter.

2. Answer the objection, that this doctrine makes no difference between a real object and an idea of it, *or* the objection that, on this doctrine things which are at the distance of several miles should be as near to us as our own thoughts (*Principles of Human Knowledge*, 41-44).

3. Give a general outline of Berkeley's theory of vision, and the allied theory of visual language.

4. Give a brief account of *Siris*.

II. *Murray's Handbook of Psychology*, II., 2-3.

1. Explain by the general theory of pleasure and pain the following passage :—

> "They are as sick that surfeit with too much
> As they that starve with nothing."

2. Illustrate the emotional value of any one of the senses.

3. Describe the feelings for external nature, *or* explain the origin of Sympathy and Antipathy.

4. Analyse the prospective and retrospective emotions, *or* the feeling of the Ridiculous.

5. "The memory of a criminal seems often to dwell, with harrowing and vivid detail, over the external circumstances of his crime, while the passion by which it was prompted is no longer imaginable." Explain this fact, and its bearing on the motive power of feelings.

THIRD YEAR HONOURS.

THURSDAY, 23RD APRIL:—MORNING, 9 TO 12.

Examiner,..... .....J. CLARK MURRAY, LL.D.

(Answer only eight questions, of which two at least must be on Mill.)

I. *Thomson's Outline of the Laws of Thought.*

1. Distinguish (*a*) Pure and Applied Logic, (*b*) Form and Matter, (*c*) First and Second Intentions.

2. What are the four functions of Language?

3. Explain and illustrate the distinction between Extension and Intension.

4. What is meant by Quantity, Quality, Relation, and Modality in Judgments, according to the common doctrine?

5. Distinguish Explicative, Ampliative, and Tautologous Judgments, giving an example of each.

6. Give Thomson's Table of Judgments with examples.

7. Compare the four Figures of the Syllogism in regard to naturalness.

8. Define Prosyllogism and Episyllogism, giving an example of each.

II. *Mill's System of Logic, Books IV. and V.*

1. Explain what is implied in Observation and Description.

2. What Science affords the completest type of scientific classification? Explain the reason.

3. Explain Mill's classification of Fallacies.

4. To which class would you refer the fallacies of Sufficient Reason, False Analogy, of Ignoratio Elenchi respectively?

B. A. ORDINARY EXAMINATION.

CALDERWOOD'S HANDBOOK OF MORAL PHILOSOPHY.

THURSDAY, 2ND APRIL :—MORNING, 9 to 12.

Examiners, ... { J. CLARK MURRAY, LL.D. / REV. PROFESSOR MACADAM.

1. Explain fully the sphere of Ethics.

2. State *either* the Intuitional *or* the Evolutional Theory of Conscience.

3. Criticise either of these theories.

4. Define any four of the following terms :—Consciousness, First Principle, Motive, Volition, Altruism, Hedonism, Categorical Imperative.

5. State the Sensational (or Development) Theory of Mind, and show that it naturally leads to Necessitarianism.

6. State any difficulties attaching to the Necessitarian Theory.

7. Sketch either the Moral Theory of Hobbes or the Utilitarianism of our day.

8. Criticise either of these two theories.

9. Give Calderwood's classification of Impulses to Action, and explain their ethical value.

10. Give a summary of the argument for the existence of God, *or* explain the relation of morality to religion.

B A. ORDINARY.

ROGER'S POLITICAL ECONOMY.

THURSDAY, APRIL 2ND :—AFTERNOON, 2 TO 5.

Examiner, ... J. CLARK MURRAY, LL.D.

1. Distinguish Co-operation of Labour (Simple Co-operation) from Division of Labour (Complex Co-operation).

2. Give some account of the origin of Money, *or* explain its functions.

3. Define Wages, Interest (Profit), Rent.

4. Explain the origin and use of Capital.

5. Describe some of the remedial schemes proposed for the elevation of labour.

6. Explain the Law of Supply and Demand, *or* state the reasons which have been urged for protecting the industries of a young country.

7. Distinguish productive and unproductive expenditure.

8. Point out the effects of a double currency *or* those of an inconvertible currency.

9. Explain and illustrate the difference between Direct and Indirect Taxation.

B. A. HONOURS IN MENTAL AND MORAL PHILOSOPHY.

HISTORY OF MODERN PHILOSOPHY.

SATURDAY, MARCH 28TH :—MORNING, 9 TO 12.

Examiner, ... J. CLARKE MURRAY, LL.D.

1. Sketch either the philosophy of Hobbes *or* that of Locke.

2. Give a brief account of the English moralists immediately subsequent to Locke.

3. Give a brief account of Condillac, Bonnet and Helvetius.

4. Sketch the philosophy of one of the following:—Descartes, Leibnitz, Berkeley.

5. Write a note on any two of the following:—Lord Herbert, Bacon, Geulincx, Malebranche, Cudworth, Henry More, the French Encyclopedists.

6. Explain the service rendered to Empiricism by Hartley, and notice some of the English Empiricists subsequent to his time.

B.A. HONOURS.

SPINOZA'S ETHICS.

SATURDAY, APRIL 4TH, 1891 :—MORNING, 9 TO 12.

Examiner, ... J. CLARK MURRAY, LL.D.

Give a full analysis of the First *or* of the Third Part of Spinoza's Ethics, with a brief explanation of its connection with the remainder

B.A. HONOURS.

DESCARTES' METHOD AND MEDITATIONS.

MILL'S LOGIC, BOOK VI.

MONDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Give an outline *either* of the Method *or* of the Meditations of Descartes.

2. Explain Mill's objection to the term Necessity in its application to voluntary actions.

3. What does Mill understand by Ethology?

4. Show that the Experimental Methods are inapplicable to Social Science.

5. Distinguish Social Statics and Social Dynamics.

6. Explain fully the Historical Method in Social Science.

B.A. HONOURS.

GREEN'S PROLEGOMENA TO ETHICS.

THURSDAY, APRIL 9TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

(*Answer any six questions.*)

1. State what a Natural Science of Man implies, and show whether the problems of Morality can be solved by such a science.

2. Show the necessity of a spiritual principle in man's knowledge of nature, as well as in nature itself; *or* show that man's intelligence is a "free cause."

3. Explain exactly the distinction between Desire, Intellect and Will.

4. "According to Hedonism, the *moral quality* of an action depends on its effects; and, while these differ, the *motive* is always the same, viz., pleasure." Criticise, showing what is the intrinsic nature of Moral Good.

5. Explain the sense in which Reason is the source of the idea of a Common Good, *or* show how the area of a Common Good extends.

6. Show that Moral Progress not only widens the area of Common Good but also gradually determines its contents; *or* distinguish the Greek and the modern conceptions of Virtue.

7. What is the practical value of Utilitarianism?

8. Criticise Sidgwick's theory of Universal Hedonism.

B. A. HONOURS.

LORIMER'S INSTITUTES OF LAW.

WEDNESDAY, APRIL 15TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish the different sources of Natural Law.

2. Explain Lorimer's theory of Conscience.

3. What does Nature reveal regarding rights and duties in relation to the Creator?

4. Show that Natural Laws are inferences from the facts of Nature, and that therefore Human Laws cannot alter facts.

5. Explain Lorimer's doctrine on the distinction between Perfect and Imperfect Obligations.

6. Explain the relation of Liberty (*a*) to Order, (*b*) to Equality.

7. What are the limits within which Aggression is a natural right?

8. What are the Primary Source and the Primary Object of Positive Law?

B. A. HONOURS.

ARISTOTLE'S NICOMACHEAN ETHICS.

FRIDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

Give an outline of Aristotle's treatment of any five of the following subjects:—

1. Definition of the Good,

2. Classification of Virtues.

3. Illustration of the Moral Virtues by examples,

4. Justice,

5. Division of the Intellectual Virtues,

6. Different kinds of Friendship,

7. Theory of Pleasure,

8. Final description of *εὐδαιμονία*.

B. A. HONOURS.

ZELLER'S STOICS, EPICUREANS AND SCEPTICS.

MONDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,..... .....J. CLARK MURRAY, LL.D.

1. Indicate how the post-Aristotelian Philosophy was developed in dogmatic, in sceptical, and in religious directions.

2. Sketch the history of Stoicism *or* that of Epicureanism *or* that of Scepticism.

3. Explain the Stoical theory of knowledge.

4. Explain the Pantheistic Materialism of the Stoics, *or* their theory of the origin and evolution of the world.

5. State fully the Stoical definition of the Highest Good, *or* the Stoical doctrine on the relation of the Emotions to Virtue.

6. Distinguish *προηγμένα* and *ἀποπροηγμένα*, *κατόρθωμα* and *καθῆκον*.

7. Explain the Stoical method of interpreting religious myths.

8. Explain fully the Atomism of the Epicureans *or* their conception of the Gods.

9. State the Epicurean definition of the Highest Good.

10. State the sceptical doctrines of Arcesilaus *or* those of Carneades.

B. A. HONOURS IN MENTAL AND MORAL PHILOSOPHY.

THE PHILOSOPHY OF KANT.

TUESDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiner,..... .....J. CLARK MURRAY, LL.D.

1. Explain the question in which Kant sums up the Problem of Pure Reason.

2. Explain the Table of the Categories, *or* give an outline of their Transcendental Deduction.

3. Explain the Analogies of Experience, *or* the Postulates of Empirical Thought.

4. Sketch the system of Cosmological Ideas, *or* the solution of the Antinomy of Pure Reason.

5. Give an outline of the Analytic *or* of the Dialectic of Pure Practical Reason.

6. Give an outline of the Critique of Judgment.

B. A. HONOURS.

MAINE'S ANCIENT LAW.

THURSDAY, APRIL 23RD :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the primitive conception of Themis and Themistes.

2. Describe the conflict between codified Law and the progress of society.

3. What was the historical connection between the doctrine of a Law of Nature and the Roman *Jus Gentium* ?

4. What was the origin of the Roman *Patria Potestas* ?

5. Criticise the theory which traces the origin of Property to a primitive occupancy of *res nullius*.

6. Illustrate the condition of primitive society by the early history of Testaments *or* of Contract.

7. Explain how the conception of Crime was gradually differentiated from other conceptions of a wrong action.

8. Point out some of the influences of Roman Jurisprudence upon Latin Theology.

FRENCH AND GERMAN.

FIRST YEAR.

FRENCH.

MONDAY, APRIL 13TH:—MORNING, 9 to 12.

Examiner,.....P. J. DAREY, M.A., B.C.L., LL.D.

1. *Harpagon.*—Allons, venez ça tous : que je vous distribue mes ordres pour tantôt, et règle à chacun son emploi. Approchez, dame Claude ; commençons par vous (elle tient un balai). Bon, vous voilà les armes à la main. Je vous commets au soin de nettoyer partout; et surtout prenez garde de ne point frotter les meubles trop fort, de peur de les user. Outre cela, je vous constitue pendant le souper au gouvernement des bouteilles ; et, s'il s'en écarte quelqu'une, et qu'il se casse quelque chose, je m'en prendrai à vous, et le rabattrai sur vos gages. Vous, Brindavoine, et vous, La Merluche, je vous établis dans la charge de rincer les verres et de donner à boire, mais seulement lorsqu'on aura soif, et non pas selon la coutume de certains impertinents de laquais, qui viennent provoquer les gens, et les faire aviser de boire lorsqu'on n'y songe pas. Attendez qu'on vous en demande plus d'une fois, et vous (*a*) ressouvenez de porter beaucoup d'eau.

MOLIÈRE, L'AVARE, *Ac. III*

(*a*) Why is vous placed before the verb?

2. Translate into French:—Of all those girls she is *the* happiest ; and it is with her parents she is *the* happiest. Explain how you write *the* in either of those sentences.

3. Translate into French:—Are you the daughter of that gentleman Yes, I am. Gentlemen, are you ready? No, we are not. What pronouns are omitted in English which are to be expressed in French, in the above sentences? Explain fully how they are to be written.

4. Explain how the following sentences are to be written into French : —A friend of yours, a book of mine, she has cut her finger, and she has cut off her finger.

5. When does *leur* take an *s* in the plural and when does it not? Give three examples.

6. Translate into French :—As soon as I *had finished* my work I went away ; and, I *had finished* my work when I went away. Explain fully how you have to write *had finished* in French.

7. Translate into French :—He is the best friend *I have*. What mood and what tense do you use in French? Why?

8. Write correctly the Past Participles in the following sentences, and give the rules: Les fautes que vous avez *commis* sont innombrables. Les aristocrates se sont *donné* la peine de naître. La chaleur qu'il a *fait* hier était accablante. Je n'ai *dormi* que six heures, mais je les ai *dormi* sans interruption. La version que vous avez *voulu* que je fisse. (*a*)

(*a*) At what mood and tense is *fisse?* Why? Write one person of all the simple tenses of that verb.

9. Translate into French:—What trimmings have you put an that evening dress? The waist is too long. If we travel I will pay your expenses. This watch goes too slow. What countryman are you? This bill is payable at sight. I have a bad sore throat. Take care not to catch cold. My head is very giddy. The leg of this boot is too high.

That poor woman was starving with hunger and thirst. We often pardon those who bother us, but we cannot pardon those whom we bother. He receives a letter postage paid every week. Have you ever seen a more beautiful picture? If we loved our country, and sincerely desired its glory, we should love liberty and hate slavery.

The affair being thus settled, Frantz set off the next day for the town, explained his reasons, and argued *pro* and *con* with all his might. As soon as the verdict was given, he hastened to return to his neighbour. "I congratulate thee, friend Gaspard," cried he, as soon as he perceived him; "the meadow is thine, and I am very glad that this business is finished."

INTERMEDIATE EXAMINATION.

FRENCH.

APRIL 13TH:—MORNING, 9 TO 12.

Examiners, ... { P. J. DAREY, M.A., B.C.L., LL.D. / REV. PROF. CHAS. TANNER.

1. Translate into English:—

Rodolphe. Filles à marier! On flaire un futur gendre.
George. Rien ne presse, et je veux y songer à loisir.
Rodolphe. Sans doute; choisis bien, puisque tu peux choisir.
Heureux homme! il n'est pas de père de famille
Qui ne se rejouît (*a*) de te donner sa fille.
Tu peux en toute chose écouter tes penchants:
Vivre en homme du monde, ou cultiver tes champs;
Ou si devant tes yeux l'ambition chatoie
Des autres fonctions on t'aplanit la voie.
—J'en suis charmé, du reste, et c'est un grand bonheur
Quand les faveurs du sort vont (*b*) aux hommes d'honneur.

George. Mon Dieu ! cette rencontre est chose fort commune
Et sans chercher beaucoup, j'en citerais plus d'une.
Le monde que je vois est plein de braves gens,
Affables, généreux, probes, intelligents,
Dévoués, toujours prêts (*c*) à rendre un bon office,
Ne reculant alors devant nul sacrifice ..

PONSARD, L'HONNEUR ET L'ARGENT, *Ac. I, Sc. III.*

2. (*a*) State the mood and tense of this verb ? (*b*) Write one person of all the simple tenses of this verb. (*c*) Why are all the preceding adjectives masculine ? State the rule.

3. Translate into English :—

La maison, les amis, les plaisirs de.....s'il était riche. Je n'irais pas me bâtir une ville en campagne, et mettre au fond d'une province les Tuileries devant mon appartement. Sur le penchant de quelque agréable colline bien ombragée, j'aurais une petite maison rustique, une maison blanche avec des contrevents verts, et, quoiqu'une couverture de chaume, soit en toute saison la meilleure, je préférerais magnifiquement, non la triste ardoise, mais la tuile, parce qu'elle a l'air plus propre et plus gai que la chaume, qu'on ne couvre pas autrement les maisons dans mon pays, et que cela me rappellerait un peu l'heureux temps de ma jeunesse. J'aurais pour cour une basse-cour, et pour écurie une étable avec des vaches, pour avoir du laitage que j'aime beaucoup. J'aurais un potager pour jardin, et pour parc un joli verger.

4. Who wrote the above extract ?

5. Who wrote the *Discours sur la Méthode*, the *Provinciales*, *Andromaque*, the *Misanthrope*, the *elegy aux Nymphes de Vaux*, the *Maximes*, the *Histoire Naturelle*, *Rhadamiste.*

6. When did the following authors live, and what have they written : Mme. de Sévigné, Bossuet, Montesquieu, Gibert, Montaigne, LaBruyère, Calvin ; and what are their principal works ?

7. Write the biography of Voltaire and Rousseau.

8. Translate into French :—*To find fault with ; to be at stake ; to leave it to ; it is all over with ; to succeed in.* And in English :—*La faim chasse le loup du bois ; manger de la vache enragée ; to put the cart before the horse, un tiens vaut mieux que deux tu l'auras ; qui se ressemble s'assemble.*

9. Translate into French :—Rasselas went often to an assembly of learned men, who met at stated times to unbend their minds and compare their opinions. Their manners were somewhat coarse, but their conversation was instructive, and their disputations acute, though sometimes too violent, and often continued till neither controvertist remembered upon

what question they began. Some faults were always general among them; every one was desirous to dictate to the rest, and every one was pleased to hear the genius or knowledge of another depreciated. In this assembly Rasselas was relating his interview with the hermit, and the wonder with which he heard him censure a course of life which he had so deliberately chosen and so laudably followed.

RASSELAS, Ch. XXII.

THIRD YEAR.

FRENCH.

THURSDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,..... ....P. J. DAREY, M.A., B.C.L. LL.D.

1. Traduisez en anglais: —

Pauline. Oui, je l'aime (*a*), Seigneur (*b*), et n'en fais pas d'excuse;
Que tout autre que moi vous flatte et vous abuse,
Pauline a l'âme noble, et parle à cœur ouvert,
Le bruit de votre mort n'est pas ce qui vous perd.
Si le ciel en mon choix eût mis mon hymenée,
A vos seules vertus je me serais donnée.
Et toute la rigueur de votre premier sort
Contre votre mérite eût fait un vain effort.
Je découvrais en vous d'assez illustres marques
Pour vous préférer même aux plus heureux monarques;
Mais, puisque mon devoir m'imposait d'autres lois,
De quelque amant pour moi que mon père eut fait choix,
Quand à ce grand pouvoir que la valeur vous donne
Vous auriez ajouté l'éclat d'une couronne,
Quand je vous aurais vu, quand je l'aurais haï,
J'en aurais soupiré, mais j'aurais obéi,
Et sur mes passions ma raison souveraine,
Eût blâmé mes soupirs et dissipé ma haine (*c*).

CORNEILLE, POLYEUCTE, *Ac. II, Sc. II.*

2. (*a*) A qui se rapport *l'* ? (*b*) Qui est ce *Seigneur?* (*c*) Quelle haine?

3. D'où Corneille a-t-il tiré le sujet de *Polyeucte?*

4. Faites connaître le caractère de Félix et de Néarque.

5. Comment cette tragédie finit-elle?

6. Qui est-ce qui a écrit: *Le Jour de morts, Le Printemps d'un proscrit, Le Mérite des femmes, La Gastronomie, Le Meunier sans souci, Les Templiers?*

7. Ecrivez une courte biographie de Guizot et de Thiers. Quels ouvrages ont-ils écrits ?

8. Traduisez en anglais :—

Combien j'ai douce souvenance
Du joli lieu de ma naissance !
Ma sœur, qu'ils étaient beaux ces jours
De France !
O mon pays, sois mes amours
Toujours !

9. Qui est-ce qui a écrit cet extrait ?

10. *Traduisez en anglais :*—Je puis me contenter d'un dîner maigre, mais je n'aime pas une maigre dîner. Cela ne laisse pas d'être vrai. Marcher à quatre pattes. A la moindre parole vous jetez feu et flammes. Prenez votre élan. Il a beau s'évertuer, je ne le croirai pas. Je n'en puis plus, j'ai couru à perte d'haleine. Il a le visage tout grêlé. Il est trop malin pour donner dans le panneau. Je me fais fort de lui faire accepter ces conditions. *Et en français :*—We paid last week the last offices to our friend. He is a man of fine bearing. Will you be one of us to-morrow ? Do call at our place before you go to the city. His ways don't suit us. Have you broached the subject to him. He is nodding to us, let us go to him. He winks at his son's faults. He pretends to be a clever man, but I am afraid he makes a mistake. We are numb with cold, light a fire immediately.

11. *Traduisez en français :*—Being now resolved to be a poet, I saw everything with a new purpose: my sphere of attention was suddenly magnified ; no kind of knowledge was to be overlooked. I ranged mountains and deserts for images and resemblances, and pictured upon my mind every tree of the forest and flower of the valley. I observed with equal care the crags of the rock and the pinnacle of the palace. Sometimes I wandered along the mazes of the rivulet, and sometimes watched the changes of the summer clouds. To the poet, nothing can be useless. Whatever is beautiful, and whatever is dreadful, must be familiar to his imagination : he must be conversant with all that is awfully vast or elegantly little.

JOHNSON, RASSELAS, Ch. X.

HONOUR EXAMINATION.

THIRD YEAR.

FRENCH.

TUESDAY, APRIL 21ST:— MORNING, 9 TO 12.

Examiner,..... P. J. DAREY, M.A., B.C.L., LL.D.

1. Ecrivez une courte biographie de La Fontaine. Ou passa-t-il une grande partie de sa vie? Qui étaient ses amis?

2. Comment était-il vu à la cour? Pourquoi?

3. Quelle est la morale des fables de La Fontaine? Citez-en des exemples.

4. Citez quelques-uns de ses vers devenus des proverbes.

5. Citez les fables que vous préférez.

6. Citez les fables où il peint le roi, le noble, le pauvre, le tyran, l'avare, les paysans, le peuple.

7. Qu'est-ce que peint La Fontaine dans le *Chêne et le Roseau*, dans le *Chien et le Loup*, dans le *Héron*, dans *le Rat qui s'est retiré du monde?*

8. Pourquoi lit-on les fables avec plaisir à tous les âges de la vie—dans l'enfance, la jeunesse, l'âge mûr et la vieillesse?

9. Dites tout ce que vous savez sur les Pensées de Pascal.

10. Qui est-ce qui a fourni le sujet de *Phèdre* à Racine? Faites l'analyse de *Phèdre*. Est-ce une pièce morale ou non? Expliquez votre réponse.

11. Pourquoi Racine a-t-il écrit les Plaideurs? Que pensez-vous de cette comédie?

12. Traduisez les deux premières scènes du IIIme. Acte des Plaideurs.

13. Dites, d'après Paul Albert, l'influence de Louis XIV sur la littérature du XVIime. siècle.

14. Faites, d'après Paul Albert, un résumé de la vie de Fénelon. Que pense-t-il de son caractère?

B. A. ORDINARY EXAMINATION.

FRENCH.

ADDITIONAL COURSE.

MONDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L., LL.D.

1. Faites connaître le *Philosophe sous les toits*. Pourquoi l'Académie l'a-t-elle couronné?

2. Quelle comparaison le *Philosophe sous les toits* fait-il entre l'homme sauvage et l'homme civilisé? Racontez la jolie anecdote du chapitre IV.

3. Faites le résumé du XIIme chapitre.

4. Traduisez en anglais ces différentes expressions tirées du *Philosophe sous les toits :* Des velléités incongrues jusqu'alors refoulées dans un coin de notre cerveau. C'est à qui se donnera le plus de mouvement. Des êtes qui détendent son esprit. Plaisantes images, surgissez devant mes yeux. Un costume de débardeur. Quelle science de clair obscur. Un commis en recouvrement. Vente au rabais. Deux sœurs déjà sur le retour. Des Parisiens casaniers. Il reçoit une visite à la derobée. Tandis que le laboureur est attaché à son sillon, l'ouvrier des villes tisse l'étoffe. L'homme engourdi dans sa nonchalance. Jeter son bonnet par dessus les moulins. Cousiner avec le diable.

5. Qui était "l'amusant curé de Meudon?" Quand vivait-il? Quels ouvrages a-t-il écrits?

6. Qu'est-ce qu'on appelle l'Ecole romantique dans l'histoire de la Littérature française? Quand fit-elle son apparence? Qui fut le chef de cette Ecole? Où parut le programme de cette Ecole? Quels en furent les principaux membres? Quelle Ecole devait-elle remplacer? L'Ecole romantique existe-t-elle encore?

7. Qui avait été le législateur de l'Ecole précédente? Quels sont les derniers représentants de cette dernière?

8. Dites tout ce que vous savez sur la vie et les écrits de Louis Blanc.

9. Qui est-ce qui a écrit cette belle poésie lyrique: le Combat de la Sérieuse? Qu'est-ce que vous entendez "par le 15 thermidor" dans cette pièce? Qu'est-ce que ce même auteur a-t-il encore publié?

10. Traduisez en français :—

If by the Mosaical law, though it was rough and severe, as being a yoke laid on an obstinate and servile nation, men were only fined, and not put to death for theft, we cannot imagine that in this new law of mercy, in which God treats us with the tenderness of a father, He has given us a greater license to cruelty than he did to the Jews. Upon these reasons it is that I think putting thieves to death is not lawful; and it is plain and obvious that it is absurd and of ill consequence to the commonwealth, that a thief and a murderer should be equally punished; for if a robber sees that his danger is the same, if he is convicted of theft as if he were guilty of murder, this will naturally incite him to kill the person whom otherwise he would only have robbed, since, if the punishment is the same, there is more security and less danger of discovery, when he that can best make it is put out of the way; so that terrifying thieves too much provokes them to cruelty.

SIR THOMAS MORE'S UTOPIA.

B.A. ORDINARY EXAMINATION.

FRENCH.

THURSDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiners,..... { P. J. DAREY, M.A., B.C.L., LL.D.
REV. PROF. CHAS. TANNER.

1. Faites le résumé du premier Acte de *Polyeucte*.

2. Quel est le plus grand caractere de cette pièce? Donnez vos raisons

3. Traduisez en anglais :—

Polyeucte. Hélas (*a*) !

Pauline. Que cet hélas (*a*) a de peine à sortir !
Encore s'il commençait un heureux repentir,
Que, tout forcé qu'il est, j'y trouverais de charmes.
Mais courage, il s'émeut, je vois couler des larmes.
Polyeucte. J'en verse, et plût à Dieu qu'à force d'en verser
Ce cœur trop endurci se pût enfin percer.
Le déplorable état où je vous abandonne
Est bien digne des pleurs que mon amour vous donne ;
Et si l'on peut au ciel sentir quelques douleurs,
J'y pleurerai pour vous l'excès de vos malheurs.
Mais si dans ce séjour de gloire et de lumière
Ce Dieu tout juste et bon peut souffrir ma prière,
S'il y daigne écouter un conjugal amour (*b*)
Sur votre aveuglement (*c*) il répandra le jour.

CORNEILLE, Jolyer Ac. IV F.

(*a*) Analysez ces deux *hélas*. (*b*) Que remarquez vous sur *conjugal amour?* (*c*) Quel aveuglement?

4. A quelle école historique M. Barante appartient-il? Quels sont ses principaux écrits? Mentionnez les autres écoles. Quels en sont les représentants les plus distingués? Quels ouvrages ont-ils écrits? Nommez six historiens français modernes.

5. Qui est-ce qui a écrit: *Les Ruines, la Mécanique céleste, les Dix années d'exil, Louis XI, Eloa, la Pauvre fille, l'Ecole des vieillards, Christine de Suède, l'Histoire de la conquête d'Angleterre, les Récits des temps mérovingiens.*

6. Ecrivez une courte biographie de Benjamin Constant et de Cuvier.

7. Donnez une analyse des *Martyrs*.

8. Traduisez en anglais :—

O temps, suspends ton vol ! et vous, heures propices
Suspendez votre cours !
Laissez-nous savourer les rapides délices
Des plus beaux de nos jours !

9. Qui est-ce qui a écrit ces vers? De quelle élégie sont-ils tirés?

10. *Traduisez en anglais :*—Ils mirent le pays à feu et à sang. Nous avons été obligés de coucher à la belle étoile. Nai-je pas raison, je m'en rapporte à vous-même. Quelque riche qu'il soit, je ne tiens pas le fréquenter. Oh, il ne se taira pas encore, il n'a pas fini de débiter son chapelet. Ses manières ne me reviennent pas. Il y va de votre honneur. C'est un livre doré sur tranche. Ils m'ont accusé réception de ma lettre. Prenez-vous y de cette manière, vous parviendrez probablement à ce que vous désirez. *Et en français :* He is shamming ill, I believe. Don't rely too much on her, she may deceive us. Do you want to make game of me? He won't stand any joking about it. They are over head and ears in debt; when I ask them for any money, they turn a deaf ear. You did it very likely unawares, I thought so. You ought to get rid of that bad habit. Get along, you can't make me believe that. I am not clever at carving. What are you mumbling about?

11. *Traduisez en français :*—We asked him many questions concerning all these things, to which he answered very willingly; only we made no inquiries after monsters, than which nothing is more common, for everywhere one may hear of ravenous dogs and wolves, and cruel men eaters; but it is not so easy to find States that are well and wisely governed. As he told us of many things that were amiss in those new-discovered countries, so he reckoned not a few things from which patterns might be taken for correcting the errors of these nations among whom we live; of which an account may be given, as I have already promised, at some other time; for the present I intend only to relate those particulars that he told us of the manners and laws of the Utopians.

SIR THOMAS MORE'S UTOPIA.

B.A. HONOUR EXAMINATION.

FRENCH.

MONDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L., LL.D.

1. Où vécut La Bruyère? Chez qui? Quelle opportunité cette position lui fournissait-elle pour étudier la société? Quel était surtout le talent de La Bruyère? Qu'est-ce qui plaît dans les *Caractères*? Comment caractériseriez-vous son style? Quel est le *criterium* que donne La Bruyère pour juger d'un bon ouvrage? Qu'est-ce qu'il aime et recommande sans cesse?

2. Faites connaître *l'Art Poétique* de Boileau. En combien de parties se divise cet ouvrage? Qu'est-ce que traite respectivement chaque partie? Définissez les termes *l'idylle, l'épigramme, la satire, le sonnet, le vaudeville.*

Quelle est l'étymologie de ce dernier terme? Citez quelques vers de l'Art poétique qui sont devenus proverbes. Jusqu'à quelle époque les lois tracées dans l'Art Poétique ont-elles été respectées?

3. Donnez une analyse aussi complète que vous pourrez *d'Horace* de Corneille. Quelle vertu Corneille a-t-il voulu mettre en relief? Citez les passages les plus remarquables de cette tragédie. Décrivez le caractère de Sabine et celui de Camille.

4. Quel est l'agent principal de l'altération des langues? Quels instruments a cet agent?

5. Comment périt la déclinaison latine?

6. Que fit-on pour remplacer les déclinaisons? Etait-ce un moyen tout-à-fait nouveau? Donnez des exemples.

7. D'où l'article français est-il venu? Comment s'est-il formé?

8. Traduisez en français:—

Our family had now made several attempts to fine; but some unforeseen disaster demolished each as soon as projected. I endeavoured to take the advantage of every disappointment, to improve their good sense, in proportion as they were frustrated in ambition. "You see, my children," cried I, "how little is to be got by attempts to impose upon the world, in coping with our betters. Such as are poor, and will associate with none but the rich, are hated by those they avoid, and despised by those they follow. Unequal combinations are always disadvantageous to the weaker side; the rich having the pleasure, and the poor the inconveniences, that result from them. But come, Dick, my boy, and repeat the fable you were reading today, for the good of the company.

THE VICAR OF WAKEFIELD, Ch. XIII.

FIRST YEAR.

GERMAN.

WEDNESDAY, APRIL 1ST:—MORNING, 9 TO 12.

Examiner.....P. TOEWS, M.A.

I. Translate:

Alexander der Große kam auf seinem Zuge, die Welt zu erobern, durch eine lange Sandwüste Asiens, in der sich nirgends Wasser befand. Endlich hatte ein Soldat etwas aufgefunden

und brachte es in ſeinem Helm dem Alexander. Da dieſer aber ſah, daß ſeine Soldaten eben ſo wie er vor Durſt lechzten, ſprach er: „Soll ich der Einzige ſein, der da trinkt?" und goß das Waſſer auf die Erde. Alle, voll Bewunderung über die Enthaltſamkeit des Königs, riefen: „Auf! führe uns fort! wir ſind nicht ermattet, wir ſind nicht durſtig; wir halten uns nicht für ſterblich, führt uns ein ſolcher König!" Heinſius.

1. Decline: Alexander der Große.

2. ſich befand: Translate into German: How was your brother yesterday?

3. Parse: Durſt and Bewunderung.

4. Accent: Sandwüſte, Soldat, aufgefunden.

5. Give the principal parts of: brachte, ſah, trinkt, goß, riefen, hatten.

II Translate: 1. The girl is crying (weinen), she has hurt her hand. 2. The emperor is satisfied (zufrieden) with his generals. 3. The doctor shook (ſchütteln) his head, for he had no hope (Hoffnung). 4. I laid (legen) the pens upon the table, but they are no longer (nicht mehr) there. 5. If Charles is not ready (fertig), we shall go (reiſen) without him to Germany. 6. Friday or Saturday we shall go to Toronto and visit (beſuchen) our cousins (Vetter). 7. Ask him which are the children of the count. 8. Of what are you speaking? 9. On what are you sitting (ſitzen)? 10. Your brother is well (ſich befinden), is he not? 11. In whose garden was the concert? 12. To whom have you sent the books which you bought yesterday? 13. When did you pay (bezahlen) for those goods (Waaren)? 14. I have not yet paid for them. 15. Are those your sisters? 16. June, July and August are very hot (heiß) in Canada. 17. Who saved (retten) that boy's life (Leben, n.)? 18. The army (Heer, n.) has marched (marſchieren) from France to Italy. 19. We always hoped that William would learn French. 20. Who was at your house a week ago?

III. Decline: Guter Baum, Junge Tochter.

INTERMEDIATE EXAMINATION.

GERMAN.

WEDNESDAY, APRIL 1ST:—MORNING, 9 to 12.

Examiner, ...P. TOEWS, M.A.

I Translate:

Mit dem Glockenſchlag vier trat der treue und furchtloſe Diener in das königliche Schlafgemach. Er ſah den geliebten Herrn tief, feſt und ſüß ſchlafen, und es ging ihm an die Seele, dieſen Schlaf zu ſtören; allein, eingedenk des ſtrengen Befehls, weckte er den König mit lauter Stimme, und als dieſer die Augen öffnete, ſagte er: „Es iſt mir leid geworden. Ich muß noch zwei Stunden ſchlafen. Komm er um ſechs Uhr wieder!" Und als Heiſe zögerte, ſetzte er heftig hinzu: „Nun aber fort, zum Zimmer hinaus!"

„Seine Majeſtät der König von Preußen hat mir, dem Kammerdiener Heiſe, befohlen, ihn heute Schlag vier Uhr zu wecken bei Verluſt der königlichen Gnade. Dem König muß ich gehorchen, und die Allerhöchſte Gnade zu verlieren wäre mein Tod," ſagte Heiſe ruhig und ernſt, aber blieb an ſeiner Stelle ſtehen. „Er hört's ja, ich will nicht!" rief der König.

Eure Majeßät müſſen," ſprach Heiſe, „der König hat's befohlen; ja, noch, mehr der König hat befohlen, im Weigerungsfalle die Decke wegzuziehen!"—Und er zog die Decke dem König weg.

1. trat, ſchlafen, befohlen: Give the principal parts and conjugate throughout the singular present indicative.

2. Distinguish between befehlen and befehligen. What case does the latter govern?

3. State the gender and give the plural of Glockenſchlag, Gemach, Befehl.

4. Schlaf. What other meaning has this word? Give the plural.

5. zwei Stunden. When are cardinal numbers inflected?

6. um ſechs Uhr. Translate: I went to meet him at half-past twelve.

7. zog die Decke dem König weg. Account for the g in the preterite and past participle of ziehen.

II. Translate: 1. What were you thinking of, when we met you yesterday? 2. Have you all you need? 3. I was told he had arrived (ankommen). 4. For whose books did you ask him? 5. He would have lent them to you, if you had asked him for them. 6. He was born (gebären) twenty-five years ago. 7. Please, take another apple. 8. If you do not take care, you will fall. 9. Ask her what day of the month it is to-day. 10. By whom have you been advised (raten dative) to go to the country? 11. The eldest son of Queen Victoria was born the ninth of November, one thousand eight hundred and forty-one. 12. Napoleon I. died on the fifth of May, eighteen hundred and twenty-one; he was fifty-two years old. 13. In what year did Goethe's Faust appear (erſcheinen)? 14. The stranger has offered (anbieten) me more for my house than you, but I do not believe he would pay as well.

III. Account for the "Umlaut" of a o u in the comparative and superlative of adjectives, and in the second and third person singular indicative present of strong verbs.

THIRD YEAR.

GERMAN.

WEDNESDAY, APRIL 1ST:—MORNING, 9 to 12.

Examiner.....P. TOEWS, M.A.

I. Translate:

Mehr durch die Furcht ſeines Namens und durch den Schrecken des Hungers, als durch ſeine gewaffnete Macht, hatte der Herzog von Parma dieſe Stadt bezwungen, die größte und feſteſte in den Niederlanden, die an Umfang der innern Stadt Paris nichts nachgibt, ſieben und dreißigtauſend Häuſer zählt, und aus zwanzig Inſeln beſteht, die durch acht und neunzig ſteinerne Brücken verbunden werden. Glänzende Privilegien, welche dieſe Stadt im Laufe mehrerer Jahrhunderte von ihren Beherrſchern zu erringen gewußt hatte, nährten in ihren Bürgern den Geiſt der Unabhängigkeit, der nicht ſelten in Trotz und Frechheit ausartete, und mit den Maximen der öſterreichiſch-ſpaniſchen Regierung in einen ſehr natürlichen Streit gerieth.

1. ſeines Namens. Translate: Do you know a gentleman by the the name of B?

2. Schrecken. Translate: He turned pale (erbleichen) from terror.

3. nachgibt. Account for the change of e into i in the present indicative.

4. Accent Privilegien, Unabhängigkeit, Maximen, and state the gender of Umfang and Trotz.

II. Translate:

Der Wirt. Ich will nicht hoffen! Zwar mit meiner Wenigkeit kann sie scherzen so viel, wie sie will, nur mit einer hohen Polizei —

Das Fräulein. Wissen Sie was, Herr Wirt?—Ich weiß mich in dieser Sache nicht zu nehmen. Ich dächte, Sie ließen die ganze Schreiberei bis auf die Ankunft meines Oheims. Ich habe Ihnen schon gestern gesagt, warum er nicht mit mir zugleich angekommen. Er verunglückte zwei Meilen von hier mit seinem Wagen, und wollte, durchaus nicht, daß mich dieser Zufall eine Nacht mehr kosten sollte. Ich mußte also voran. Wenn er vierundzwanzig Stunden nach mir eintrifft, so ist es das Längste.

Der Wirt. Nun ja, gnädiges Fräulein, so wollen wir ihn erwarten.

Das Fräulein. Er wird auf Ihre Fragen besser antworten können. Er wird wissen, wem und wie weit er sich zu entdecken hat; was er von seinen Geschäften anzeigen muß, und was er davon verschweigen darf.

Der Wirt. Desto besser! Freilich, freilich kann man von einem jungen Mädchen (die Franziska mit einer bedeutenden Miene ansehend) nicht verlangen, daß es eine ernsthafte Sache, mit ernsthaften Leuten, ernsthaft traktiere —

Lessing, Minna von Barnhelm.

1. nehmen. Give the word which is now generally used instead of sich (in einer Sache) nehmen.

2. ließen. Translate:—1. Why did he not make the horses go faster? 2. I have had a house built.

3. darf. Conjugate throughout the present subjunctive singular and translate: you would not have been permitted to speak to him thus.

III. Translate:—1. What do you prefer, hunting or fishing? I like both. 2. Where does the barber (Barbier) live who cut your hair? 3. We should have remained (bleiben) in the country if our friends had also remained. 4. Who went past your house when you were looking out of the window? 5. He seemed not to hear what I said to him. 6. The ship has sunk, and the people who were on board have been drowned. 7. Which is poorer, he who has no money, or he who has no friends? 8. What would have become of

you if your father had not come back? 9. The River St. Lawrence is the broadest in Canada; below the City of Quebec it is broadest. 10. Except my brother and me nobody, is at home. 11. He has not been here for a long time. 12. Will you be so kind as to lend me your grammar? 13. I do not need to go to school to-day. 14. Ask him what that is in German. 15. My father could have sold his house last week, but he did not want to sell it. 16. You will have to copy (abſchreiben) that exercise.

LITERATURE.

I. Name the principal works of Hartmann von Aue and Godfry of Strasburg, and tell what you know about Walther von der Vogelweide.

II. Name the principal personages in the "Song of the Niebelungen." To which period of German literature does the poem belong?

III. Briefly sketch the life of Klopstock, and characterize his "Messias."

B. A. ORDINARY EXAMINATION.

GERMAN.

WEDNESDAY, APRIL 1ST:—MORNING, 9 TO 12.

Examiner,.....P. TOEWS, M.A.

I. Translate:—

Da kam er endlich dicht an des übergetretenen Baches Rand und ſah im Mondenlicht, wie dieſer ſeinen ungezähmten Lauf, gerade vor den unheimlichen Wald hin, genommen hatte, ſo daß er nun die Erdſpitze zur Inſel machte.—O lieber Gott, dachte er bei ſich ſelbſt, wenn es Undine gewagt hätte, ein paar Schritte in den fürchterlichen Forſt hinein zu thun; vielleicht eben in ihrem anmuthigen Eigenſinn, weil ich ihr nichts davon erzählen ſollte,—und nun wäre der Strom dazwiſchen gerollt und ſie weinte nun einſam drüben bei den Geſpenſtern!—Ein Schrei des Entſetzens entfuhr ihm, und er klomm einige Steine und umgeſtürzte Fichtenſtämme hinab, um in den reißenden Strom zu treten und, watend oder ſchwimmend, die Verirrte drüben zu ſuchen. Es fiel ihm zwar alles Grauſenvolle und Wunderliche ein, was ihm ſchon bei Tage unter den jetzt rauſchenden und heulenden Zweigen begegnet war. Vorzüglich kam es ihm vor, als ſtehe ein langer weißer Mann, den er nur allzu gut kannte, grinſend und nickend am jenſeitigen Ufer; aber eben dieſe ungeheuern Bilder riſſen ihn gewaltig nach ſich hin weil er bedachte, daß Undine in Todesängſten unter ihnen ſei und allein.

Fouquet, Undine.

1. Mondenlicht. Distinguish between Monde and Monden.
2. zur Inſel machte. Translate: They were making a fool of him.
3. anmuthig. Where should the h after t be omitted?

II. Translate:

Herzogin.

Ich that nach Ihrer Vorſchrift, führte an,
Sie hätten über unſer Kind beſtimmt,
Und möchten gern dem künftigen Gemahl
Noch vor dem Feldzug die Verlobte zeigen.

Wallenſtein.

Muthmaßte man die Wahl, die ich getroffen?

Herzogin.

Man wünſchte wohl, ſie möcht' auf keinen fremden,
Noch lutheriſchen Herrn gefallen ſein.

Wallenſtein.

Was wünſchen Sie, Eliſabeth?

Herzogin.

Ihr Wille, wiſſen Sie, war ſtets der meine.

Wallenſtein (nach einer Pauſe).

Nun—Und wie war die Aufnahm' ſonſt am Hofe?
(Herzogin ſchlägt die Augen nieder und ſchweigt)
Verbergen Sie mir nichts! Wie war's damit?

Herzogin.

O mein Gemahl! Es iſt nicht alles mehr,
Wie ſonſt. Es iſt ein Wandel vorgegangen.

Wallenſtein.

Wie? Ließ man's an der alten Achtung fehlen?

Herzogin.

Nicht an der Achtung. Würdig und voll Anſtand
War das Benehmen. Aber an die Stelle
Huldreich vertraulicher Herablaſſung
War feierliche Förmlichkeit getreten.
Ach! und die zarte Schonung, die man zeigte,
Sie hatte mehr vom Mitleid als der Gunſt.
Nein! Herzog Albrechts fürſtliche Gemahlin,
Graf Harrachs edle Tochter, hätte ſo—
Nicht eben ſo empfangen werden ſollen!

Wallenſtein.

Man ſchalt gewiß mein neueſtes Betragen!

Herzogin.

O hätte man's gethan! Ich bin's von lang her
Gewohnt, Sie zu entſchuldigen, zufrieden
Zu ſprechen die entrüſteten Gemüther.
Nein, niemand ſchalt Sie. Man verhüllte ſich
In ein ſo laſtend feierliches Schweigen.
Ach! hier iſt kein gewöhnlich Mißverſtändniß, keine
Vorübergehende Empfindlichkeit.
Etwas unglücklich unerſetzliches iſt
Geſchehn! Sonſt pflegte mich die Königin
Von Ungarn immer ihre liebe Muhme
Zu nennen, mich beim Abſchied zu umarmen.

Schiller, Wallenſtein.

1. führte an: Translate: He quoted a passage (Stelle) from Cicero.

2. Distinguish between Gemahl and Gatte.

3. Give the plural of Wahl.

4. Accent lutheriſchen. How is the word now generally pronounced?

5. Was wünſchen Sie. Translate: Do you wish him to read the letter?

6. Ihr Wille. Translate: Ich habe es mit Willen gethan.

III. Translate:

The younger Dumas once perpetrated (machen) a cruel (bitter) joke (Witz) at the expense (auf Koſten) of the Manzanares (masc.), the rivulet (Bach) that runs through (durchlaufen) Madrid, and is called a river by the grandiloquent (großſprecheriſch) inhabitants of this city. When the famous dramatist (Drama'tiker) was one day present (beiwohnen) at a bullfight (Stiergefecht), either the heat, or some revolting (empörend) incident (Vorfall, m.) in the show (Schauſpiel, n.), overcame (überwäl'tigen) him to such an extent (dermaßen) that he fainted (ohnmächtig werden). On somebody bringing him a glass of water, as he was recovering (ſich erholen), Dumas declined (ablehnen) it, saying in (mit) a faint (ſchwach) voice: "Go and pour it into the Manzanares; the river needs (nötig haben) *it* much more than I!"

LITERATURE.

I. State the characteristic of Lessing's theory of epic poetry, as it is laid down in Laokoon.

II. Name Wieland's principal works, and state his influence on German literature. In which of his works are his opinions on society and government fully expressed?

III. Describe the character of Faust in Goethe's philosophical poem.

HONOURS.

THIRD YEAR.

GERMAN.

TUESDAY, MARCH 31ST, 9 TO 12.

Examiner, ... P. TOEWS

1. Translate :—

Attinghausen.

Lern' dieſes Volk der Hirten kennen, Knabe!
Ich kenn's, ich hab' es angeführt in Schlachten,
Ich hab' es fechten ſehen bei Favenz.
Sie ſollen kommen, uns ein Joch aufzwingen,
Das wir entſchloſſen ſind nicht zu ertragen!
—O lerne fühlen, welches Stamms du biſt!
Wirf nicht für eiteln Glanz und Flitterſchein
Die echte Perle deines Werthes hin —
Das Haupt zu heißen eines freien Volks,
Das dir aus Liebe nur ſich herzlich weiht,
Das treulich zu dir ſteht in Kampf und Tod —
Das ſei dein Stolz, des Adels rühme dich —
Die angebor'nen Bande knüpfe feſt,
Ans Vaterland, ans theure, ſchließ' dich an,
Das halte faſt mit deinem ganzen Herzen.
Hier ſind die ſtarken Wurzeln deiner Kraft;
Dort in der fremden Welt ſtehſt du allein,
Ein ſchwankes Rohr, das jeder Sturm zerknickt.
O komm, du haſt uns lang nicht mehr geſehn,
Verſuch's mit uns nur einen Tag — nur heute,
Geh' nicht nach Altorf — hörſt du? heute nicht!
Den einen Tag nur ſchenke dich den Deinen!

(Er faßt ſeine Hand.)

Rubenz.

Ich gab mein Wort — Laßt mich — Ich bin gebunden.

Attinghausen

(läßt seine Hand los, mit Ernst.)

Du bist gebunden — Ja, Unglücklicher!
Du bist's, doch nicht durch Wort und Schwur,
Gebunden bist du durch der Liebe Seile!
(Rudenz wendet sich weg.)
— Verbirg dich, wie du willst. Das Fräulein ist's,
Bertha von Bruneck, die zur Terrenburg
Dich zieht, dich fesselt an des Kaise Dienst.
Das Ritterfräulein willst du dir erwerben
Mit deinem Abfall von dem Land — Betrüg' dich nicht!
Dich anzulocken, zeigt man dir die Braut;
Durch deiner Unschuld ist sie nicht beschieden.

1. Write a note on Favenz.

2. heissen Translate: He bade him be silent.

3. Bande. What gender. Distinguish between Bänder, and Bande

4. Herzen. Decline.

II. Translate: St. 18 to 21.

Auf einmal gähnt im tiefsten Felsengrund
Ihn eine Höhle, an, vor deren finsterm Schlund
Ein prasselnd Feuer flammt. In wunderbaren Gestalten
Ragt aus der dunklen Nacht das angestrahlte Gestein.
Mit wilden Gebüsche versetzt, das aus den schwarzen Spalten
Herab nickt, und im Wiederschein
Als grünes Feuer brennt. Mit lustvermengtem Grauen
Bleibe unser Ritter stehn, den Zauber anzuschauen.

Indem schallt aus dem Bauch der Gruft ein donnernd Halt!
Und plötzlich stand vor ihm ein Mann von rauher Gestalt,
Mit einem Mantel bedeckt von wilden Katzenfellen,
Der, grob zusammengeflickt, die rauhen Schenkel schlug;
Ein graulich schwarzer Bart hing ihm in krausen Wellen
Bis auf den Magen herab, und auf der Schulter trug
Er einen Cedernast, als Keule, schwer genug,
Den größten Stier auf einen Schlag zu fällen.

Der Ritter, ohne vor dem Mann
Und seiner Ceder und seinem Bart zu erschrecken,
Beginnt in der Sprache von Ok, der einz'gen, die er kann,
Ihm seinen Nothstand zu entdecken.
„Was hör'ich?" ruft entzückt der alte Waldmann aus;
O süße Musik vom Ufer der Garonne!
Schon sechzehnmal durchläuft den Sternenkreis die Sonne,
Und alle die Zeit entbehr' ich diesen Ohrenschmaus.

Willkommen, edler Herr, auf Libanon, willkommen!
Wiewohl sich leicht erachten läßt,
Daß ihr den Weg in dieses Drachennest
Um meinetwillen nicht genommen.
Kommt, ruhet aus, und nehmt ein leichtes Mahl für gut,
Wobei die Freundlichkeit des Wirths das Beste thut.
Mein Wein (er springt aus diesem Felsenkeller)
Verdünnt das Blut, und macht die Augen heller."

III. Translate:

At the time when Napoleon lived as an exile (der Verbannte) in London, he was always a welcome guest at bei Lady Blessington's, in Gove House. Very soon after his return (Rückkeln) to Paris, while his political (politisch) prospects (dussicht) were still rather (ziemlich) doubtful, (zweifethoff) her ladyship (the lady) paid a visit to (besuchen) to that capital, and met the prince driving in the Bois de Boulogne, (Boulogner Wäldchen). It was an embarrassing (verlegen) encounter, (Fusammentreffen) for the future (zu Künftig) emperor of the French had shown (erweisen) himself anything but (wichts weniger als) grateful for her ladyship's (the lady's) courtesy. Freundlich Keit. He saluted (grüssen) her, however (indessen), with forced politeness (Höflich Keit) and asked: "Countess (gnädige Grafin) shall you stay long in Paris?" "I really (wirklich) cannot say," answered Lady Blessington with a bewitching (bez ambomd) smile; "and you?"

LITERATURE.

I. Compare the two romances Percival and Tristan.

II. Characterize the drama of the later Middle Ages.

III. Account for the comparative poverty of the prose literature of the Middle High German Period.

HEBREW.

ELEMENTARY COURSE.

WEDNESDAY, APRIL 1ST :—9 TO 12, A. M.

Examiner, PROF. D. COUSSIRAT, B.A., B.D., OFFICIER D'ACADEMIE.

1. Translate :

(*a*) וּבָרָא א־ אֶת־הַתַּנִּינִם הַגְּדֹלִים וְאֵת כָּל־נֶפֶשׁ הַחַיָּה הָרֹמֶשֶׂת אֲשֶׁר שָׁרְצוּ הַמַּיִם.

(*b*) וַיִּצְמַח יְהוָה א־ מִן־ הָאֲדָמָה כָּל־עֵץ נֶחְמָד לְמַרְאֶה וְטוֹב לְמַאֲכָל וְעֵץ הַחַיִּים בְּתוֹךְ הַגָּן׃

(*c*) קִדַּשְׁתִּי אֶת־הַיּוֹם.

(*d*) נָתַתִּי לוֹ אֶת הָאָרֶץ הַזֹּאת.

(*e*) מַה־ יִּקְרָא הָאָדָם לְכָל־הַבְּהֵמָה.

(*f*) לָקַח הָאִישׁ מִן־הֶעָפָר.

2. Point and translate the following;

ויאמר האדם זאת הפעם עצם מעצמי ובשר מבשרי לזאת יקרא אשה כי מאיש לקחה זאת.

3. Render into Hebrew : (1) This spirit is the Spirit of God. (2) The sun and the moon are in the expanse of the heavens. (3) In the garden which God planted in Eden was fruit. (4) God gave to the fowl of the heavens the seed of the earth for food. (5) This woman was taken from this man.

4. Parse (1) וַיַּעַשׂ (2) וּלְהַבְדִּיל : explain the ו. (3) יִשְׁרְצוּ (4) וַיְבָרֶךְ : explain the ֶ under ב and the ֶ under ר. (5) כִּדְמוּתֵנוּ : explain the ִ under כ and the ֵ under ת. (6) בְּצַלְמוֹ.

5. State the principle of Syntax implied in כָּל־ נֶפֶשׁ הַחַיָּה.

6. Write out (*a*) the Niphal Imperfect of פָּקַד, and (*b*) the Hiphil perfect of בָּדַל.

7. Attach the light and grave Suffixes (*a*) to the singular of נֶפֶשׁ, and (*b*), to the plural of מֶלֶךְ.

8. (*a*) Explain the difference between עֶבֶד and מִשְׁלַ. (*b*) Add the vowels to תקטלי.

9. Name three accents of high rank and state their use.

10. Oral examination : Reading.

HEBREW.

INTERMEDIATE COURSE.

WEDNESDAY, APRIL 1ST :—9 TO 12 A. M.

Examiner, PROF. D. COUSSIRAT, B.A., B.D., OFFICIER D'ACADEMIE.

1. Translate : —(*a*) Genesis VI, 6-8 inclusive ;
(*b*) Exodus XX, 12-16 "
(*c*) Judges V, 28-30 "

2. Parse fully the following words : (1) הַחֵל (2) יָדוֹן (3) רַבָּה (4) וַיִּנָּחֶם ; explain the dagesh in נ and the Seghol under ח (5) אִמְּךָ (6) תִּרְצַח ; explain the ֫ over ת and the ֫ under ח. (7) אַחֲרוּ (8) תַּעֲנֻנָּה (9) אֲמָרֶיהָ (10) רַקָּמָתַיִם.

3. Give an instance of synonymous parallelism in Hebrew poetry.

4. Attach the light and grave Suffixes to חָכָם in the plural.

5. Give a tabular view (*a*) of יָשַׁב in Niphal, and (*b*) of שׁוּב on Hiphil.

6. State the principles of Syntax in the following sentences :

(*a*) יָשַׁב אֲהֵל וּמִקְנֶה. (*b*) בַּיָּמִים הָהֵם.

7. Point and translate the Masoretic Note at the end of the Book of Judges.

8. Point and translate the following :

צוה אלהים את האדם לעבד את האדמה

9. Render into Hebrew :

(1) Hear ye (*m.*) my voice and give ear to that which I shall say.

(2) Why didst thou kill the man I sent to thee ?

(3) I do not know the name of the man.

(4) I shall put forth my hand and take the fruit and eat.

10. Oral examination. Reading.

HEBREW.

ADVANCED COURSE.

WEDNESDAY, APRIL 1ST :— 9 TO 12 A. M.

Examiners. { PROF. D. COUSSIRAT, B.A., B.D., OFFICIER D'ACADEMIE. PROF. G. WEIR, LL.D.

1. Translate :—

(*a*) Job III, 17, 18, 19 ;

(*b*) Prov. III, 13, 14, 15 ;

(*c*) Psalm XV, 1, 2, 3 ;

2. Parse fully the following words ;

(1) יִגְיְעִי (2) שְׁאֲנַנוּ (3) יְפִיהּ (4) יְשׁוּ (5) קָדְשֵׁךְ (6) יְקַו (7) מְלֵיךְ (8) זְכָר־.

3. Write Notes on (*a*) מְלִיצָה, חִידָה, מָשָׁל ;

(*b*) לָמָּה and מַדּוּעַ.

4. Translate into Hebrew :

(1) Length of days and years of life and peace shall they add to thee. (2) Trust in the Lord with all thy heart. (3) God will direct thy paths.

5. Write out in Hebrew, insert vowel points and translate the Masoretic Note at the end of the Book of Proverbs.

6. Illustrate, using the verbs סָבַב and קוּם the points of similarity and dissimilarity in these classes of verbs.

7. Compare the forms of the Hiphil Perfect (3 pers. sing. m.) as they appear in the strong verb and in the various classes of weak verbs.

8. State the order of words in the Hebrew sentence.

9. Give a general view of the Aramaic languages (Chaldee and Syriac), as to their grammatical forms and their literary use.

10. Oral examination : Reading.

THE NEIL STEWART PRIZE.

TRANSLATION.

THURSDAY, APRIL 16TH :—9 TO 12 A.M.

Examiner,.....REV. D. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Translate literally Ruth IV, 9 to 12 inclusive.

2. Write notes on (1) בֹּעַז (2) רוּת (3) נָעֳמִי

3. Parse בָּנוֹ—Distinguish it from בְּנוֹ

4. Translate literally Ecclesiastes V, 5-8 inclusive.

5. What are the different translations given of verse 8? Criticize them and justify your own.

6. Parse (1) לַחֲטִיא (2) מֵיעֲשֶׂה—Explain the nature of the vowels in those words.

7. Distinguish between מִשְׁפָּט, נְדֶר and יְחֹק

8. Translate literally Malachi III, 20-24 inclusive.

9. Write notes on (1) יוֹם יהוה (2) חֵרֶם

10. Explain fully the meaning of יִתְקַק סִימָן

THE NEIL STEWART PRIZE.

GRAMMAR.

FRIDAY, APRIL 17TH :—9 TO 12 A.M.

Examiner,.....REV. D. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Compare the Semitic and the Indo-European languages as to their grammatical structure and lexicography.

2. Write briefly on the two periods of the history of the Hebrew language, as it is found in the Old Testament.

3. How do you distinguish a Qamets and a Qamets-Chatuph? Give examples.

4. Give a tabular view of the Piel perfect and imperfect in the strong and weak verbs.

5. Write fully the Niphal of גָּלָה in all tenses and moods.

6. Explain the classification of nouns in Gesenius. On what principle does it rest?

7. Attach the light and grave suffixes to the singular and plural of זָקֵן

8. State the relation of the subject and predicate in respect to gender and number.

NATURAL SCIENCES.

FIRST YEAR.

CHEMISTRY.

TUESDAY, APRIL 14TH :—MORNING, 9 TO 12.

Examiner,..... . .....B. J. HARRINGTON, B.A., PH.D.

1. How may ordinary Phosphorus be converted into the red variety? In what respects do the two varieties differ from one another?

2. In order to obtain 50 grams of Bromine, what quantities of Manganese Dioxide, Potassium Bromide and Sulphuric Acid should be used?

3. How could you separate the metals Copper, Iron and Calcium, if present in the same solution?

4. Give the names and composition of the ores of Iron.

5. Define each of the following terms :—Anhydride, Hydroxide, Acid Salt, Tribasic Acid, Amalgam. Give examples.

6. Give the preparation and properties of Sulphur Dioxide.

7. Define Specific Heat. What relation does the specific heat of an element bear to its atomic weight?

8. Lime is sometimes used to soften certain hard waters. Explain the reaction. State also the cause of boiler incrustation.

9. Arsenic. Its sources, preparation and properties. Also two tests for its detection.

10. In the manufacture of Sodium Carbonate by the Ammonia-Soda process, what reactions take place? Give the equations.

INTERMEDIATE EXAMINATION.

BOTANY.

THURSDAY, APRIL 16TH :—9 TO 12 A.M.

Examiner,..... .....D. P. PENHALLOW, B.Sc.

1. Explain what is expressed by the term "alternation of generations." Give a graphic representation of the relative predominance of the different generations, as applied to all plants.

2. Outline the life history of a fern, and show which generation is predominant in Filices.

3. Outline the life history of a moss, and show which generation is predominant in Bryophytes.

4. State the principal points of connection between the Pteridophytes and Gymnosperms.

5. Point out the principal differences between the Angiosperms and Gymnosperms as based upon the reproductive process.

6. Show the principal differences between Filices, Equisetum and Lycopodium as based upon habit of growth and character of the fruit.

7. Describe the general character and function of the Prothallus, and show its relative development from Bryophytes to Angiosperms.

8. Give a concise statement of the principles of the Linnæan system of classification.

9. Revise the following, and state reasons for changes made :—

Phanerogams :—
- (1) Dicotyledons.
  - (*a*) Angiosperms.
  - (*b*) Gymnosperms.
- (2) Monocotyledons.

Cryptogams :—
- (3) Vascular Acrogens.
- (4) Cellular Acrogens.
- (5) Thallogens.

10. Describe fully the specimen given.

Answers to eight questions, including number 10, are required.

VEGETABLE HISTOLOGY.

WEDNESDAY, APRIL 8TH :—9 TO 12 A.M.

Examiner,..... .....D. P. PENHALLOW, B. Sc.

1. Given, a $\frac{1}{4}$ inch objective, a $\frac{1}{2}$ inch eye-piece and an 8 inch tube. Determine the theoretical amplification of the instrument. Also show how the magnifying power may be accurately measured.

2. Explain the effects of chromatic and spherical error in an objective.

3. Give a method of differentiating Aleurone and Crystalloids, and show where such bodies should be sought

4. Give a method for the determination of continuity of protoplasm

5. Given, a section of the stem of a bean. It is required (1) to remove the Albuminoids and Amyloids, (2) to differentiate the lignified and unlignified tissues, and (3) prepare for a balsam mount. Give a method of accomplishing each result.

6. Wood cells, or the cells of stone tissue, are to be studied individually. Give a method of separation. Explain the specific action of the treatment.

7. Show how many directions of section are required for complete exhibition of structure in an exogenous stem, and point out the principal differences shown.

8. Explain the situation and characteristics of Collenchyma tissue.

9. Compare the structure of the exogenous and endogenous stems in transverse section.

10. Give the component parts of a stoma, with a plan and sectional drawing. Compare the stomata of the bean with those of the Century plant.

THIRD AND SECOND YEARS APPLIED SCIENCE.

ZOOLOGY.

TUESDAY, APRIL 14TH :—2 P.M.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Characterise the Province *Echinodermata*, and give an example of each of its classes, with a statement of the points in which these differ.

2. Name the orders of the *Annulata* proper, and characterise one of them, with examples.

3. Describe the Respiratory Organs of Nudibranchiate and Pulmonate Mollusks, and Arachnida.

4. State the external structures of Insects, and their division into orders.

5. State the characters of the *Reptilia*, and the distinction between the batrachians and reptiles proper.

6. State the characters and Zoological position of the *Polyzoa*, *Anthozoa*, *Pteropoda* or *Lamellibranchiata*, and describe a characteristic species, with examples.

7. What animals are indicated by the terms—*Cephalopoda*, *Myriapoda*, *Ganoidea*, *Ungulata*. State shortly their characters, and give examples.

8. State the distinctive characters of *Brachiopoda* and *Tunicata*, and mention the more important subdivisions of one of them.

9. Describe the structures of Decapod Crustaceans, and state how these animals are subdivided.

10. State the distinctive characters of the class *Pisces* and its division into orders.

11. State what you know of the Zoological classification of the specimens exhibited.

B.A. ORDINARY EXAMINATION

AND THIRD YEAR APPLIED SCIENCE.

MONDAY, APRIL 13TH:—MORNING, 9 TO 12; AFTERNOON, 2 TO 5.

ORDINARY GEOLOGY.

Examiners,..... .... { J. W. DAWSON, LL.D., F.R.S
F. D. ADAMS, M.A. Sc.

1. Describe a typical glacier, explaining the nature of the Moraines, Crevasses, Glacier Tables and Glacier Gate. Show how its motion resembles that of a river, and describe its action as a denuding agent.

2. Define the following terms as applied to rocks:—Vesicular, Amygdaloidal, Porphyritic, Holocrystalline, Basic, Schistose.

3. Draw out a scheme showing the classification of the Igneous rocks.

4. Describe the several kinds of faults, explaining the terms Hade, Upthrow and Downthrow. Illustrate your description by means of diagrams.

5. State shortly the probable physical conditions of the Lower and Middle Laurentian and the Huronian.

6. Explain the peculiarities of the Calciferous and Salina formations and mention some characteristic fossils.

7. What Crustaceans, Corals and Brachiopods are most characteristic of the Acadian, Trenton and Niagara periods?

8. State the leading differences of the Floras of the Carboniferous and Cretaceous coal-formations.

9. Outline the physical geography of N. America in the Erian Period or that of W. Europe in the Early Kainozoic.

10. State the normal succession of deposits in the Pleistocene of Canada and the climatal conditions indicated.

2 P. M.

---

11. State the geological formations to which the fossils exhibited belong, and name the fossils; and name and describe the rock specimens.

THIRD YEAR HONOURS IN NATURAL SCIENCE AND THIRD YEAR IN APPLIED SCIENCE.

(Mining and Chemistry Courses.)

MINERALOGY.

TUESDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiners..... { SIR WM. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.
F. D. ADAMS, M.A. Sc.

1. Define the term form as used by the crystallographer, and distinguish between open and closed forms.

2. How may forms be classified according to grade of symmetry?

3. Explain how by different methods of selection of planes, three kinds of Isometric hemihedrism result from the hexoctahedron.

4. What are the crystallographic constants in the Monoclinic and Triclinic systems?

5. State what you know with regard to the internal imperfections of crystals and their causes.

6. Distinguish between prisms of the first, second and third orders.

7. Explain the notation of crystal faces in the Hexagonal System.

8. Describe the crystals made up of the following forms:—

(1) $OP.\ \ \infty P\infty.\ \ \infty P\infty.\ \ \infty P.\ \ 2P.\ \ -P.$

(2) $OP.\ \ \infty P\bar{\infty}.\ \infty P\overset{U}{\infty}.\ \ \infty P1.\ \frac{1}{2}\infty P.\ \frac{1}{2}\infty P\overset{U}{2}.\ \ P^{1}.$

(3) $\frac{O}{2}.\ -\frac{O}{2}\ \ \infty O\infty.\ \ \infty O.\ \frac{5O\frac{5}{3}}{2}.$

9. State what you know with regard to the crystalline form and chemical composition of Garnet and Beryl.

10. Name the rhombic Pyroxenes, and characterize them briefly.

11. Describe carefully each of the minerals and models exhibited.

B.A. HONOURS AND B.A.Sc. MINING COURSE.

(First Paper.) MINERALOGY.

Tuesday, March 31st:—Morning, 9 to 12.

Examiners, ... { Sir J. W. Dawson, LL.D., F.R.S. / B. J. Harrington, B.A., Ph.D. / F. D. Adams, M.A. Sc.

1. Explain the distinction between unisilicates, bisilicates and subsilicates. How would you ascertain to which of these groups a mineral belongs?

2. The Triclinic system. Explain the notation of the faces.

3. Isomorphism, Pleochroism, Asterism. Explain each of these terms, giving illustrations.

4. What is a percussion-figure? Explain its value in distinguishing Micas.

5. State what you know with regard to the action of Hydrochloric Acid upon each of the following minerals:—Analcite, Wernerite, Wollastonite, Sphalerite, Cuprite, Pyrolusite.

6. Give the blowpipe characters of Millerite, Mimetite, Anglesite, Tetrahedrite and Azurite.

7. Göthite, Niccolite, Pyrargyrite. Describe these species.

8. What is the composition of Chalcotrichite, Freibergite, Gahnite, Jade Spessartite, Sodalite?

9. Name the Feldspars, and give the characters by which they may be distinguished from one another.

10. What are the principal economic minerals of the Province of Quebec? State what you know with regard to their localities and mode of occurrence.

SPECIMENS:—Afternoon, 2 to 4.

Name the minerals exhibited, and give their characters as seen in the specimens.

B.A. HONOUR EXAMINATIONS IN GEOLOGY AND NATURAL HISTORY.

(SECOND PAPER.) CANADIAN GEOLOGY.

MONDAY, APRIL 6TH:—MORNING, 9 TO 1.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.
FRANK D. ADAMS, M. AP. SC.

1. Into what great physical divisions does Canada naturally fall when considered geologically? Define the limits of these, and state briefly the systems of formations which underlie them.

2. Describe the mode of occurrence and sub-divisions of the pre-Cambrian rocks in the vicinity of the Lake of the Woods, and show how these rocks may be correlated with those of the typical Laurentian and Huronian areas elsewhere in Canada.

3. Give in tabular form the sub-divisions of the Cambrian Rocks of the Dominion. State briefly the distribution of each formation.

4. Describe briefly the Silurian rocks of Canada. Give their geographical distribution. Correlate the various sub-divisions of these rocks in the several areas. Mention some of the more characteristic fossils of the Niagara limestone.

5. Draw a line of section across the Gaspé peninsula from the Gulf of St. Lawrence to mouth of the Cascapedia on the Bay Chaleur, continue it in a south-easterly direction to Minudie on the Bay of Fundy, and then on to the south-west end of the Joggins Section.

6. The geographical distribution and sub-divisions of the Cretaceous in the North-West Territories.

7. When does mineral fuel occur in Canada? State the amounts raised in the several provinces and the age of the rocks from which it is obtained in each district.

8. What metals are mined in each of the following formations:—Animikie, Keewenian, Nova Scotia Coast Series? Describe the mode of occurrence in any one of them.

9. On what formations are the following places in Canada built:—Halifax, St. John, N.B., Quebec, Montreal, Toronto, Guelph, Medicine Hat, Calgary?

10. State the age and general characters of the following:—
Albert Shales.
Kootanie Series.
Vancouver Series.
Bonaventure Formation.
Windsor Series.
Acadian Group.
Give the characteristic fossils of either of the last two.

11. There is in a certain part of Canada a great thickness of beds following one another in regular succession, and representing a great lapse of time. Three formations *a*, *b* and *c* occurring in this hold characteristic fossils as follows:—

(*a*) *Oxytoma mucronata, Trigonia intermedia, Trigonarca tumida,* with species of the following:—*Terebatula, Ostrea, Camptonectes, Lima, Cyprina, Ammonites, Belemnites.*

(*b*) *Halysites catenulatus, Favosites, Zaphentis.*

(*c*) *Didymograptus enodus, Glossograptus ciliatus, Cryptograptus tricornis, Diplograptus rugosus, Climacograptus cælatus.*

What is the age of each of these three formations?

B.A. HONOURS IN GEOLOGY AND NATURAL HISTORY.

(Third Paper.)

PALÆONTOLOGY.

Friday, April 10th:—9 a.m. to 12, and 2 to 5.

Examiners,..... { J. W. Dawson, LL.D., F.R.S.
B. J. Harrington, B.A., Ph.D.
F. D. Adams, M.A.Sc.

1. Describe the structures of *Eozoon* or of *Protospongia*, and state views as to their affinities.

2. Notice the parts which would be most important in describing or determining a Graptolite or a Crinoid, and illustrate by figures.

3. State in tabular form the characters of the families of *Brachiopoda*, and their range in geological time.

4. What are the characteristic differences of Trilobites and Merostomata, and their range in time. Figure and name the parts of a typical Trilobite.

5. Describe the parts of a typical Rugose and Tabulate Coral, with their characteristic differences.

6. Indicate the relations of the orders of Fishes, Batrachians or Reptiles to geological time.

7. State what you know of *Nummulites*, *Eocystites*, *Paradoxides*, *Orthoceras*, *Murchisonia*, *Dictyonema*, and their geological relations.

8. To what classes and orders do the following genera belong and in what formations do they occur:—*Ptilodyctia*, *Monticulipora*, *Fenestella*, *Leperditia*.

9. Describe and figure, *Endoceras*, *Cyrtoceras*, *Baculites*, *Belemnites*.

10. Describe *Receptaculites*, *Stromatopora*, *Palaeocrangon*, or *Cyrtodonta*, with their geological relations.

EXAMINATION IN SPECIMENS (2 P.M.).

Refer the specimens exhibited to their geological formations, and to their places in the Zoological classification.

B.A. HONOURS IN GEOLOGY AND NATURAL HISTORY.

(FOURTH PAPER.) PETROGRAPHY.

MONDAY, APRIL 20TH:—MORNING, 9 TO 1.

Examiners, ... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.
FRANK D. ADAMS, M. AP. SC.

1. Explain the terms Optic Axis, Crystallographic Axis and Elasticity Axis. Show by sketches how these are related to one another in Calcite, Hornblende, Sanidine and Scapolite.

2. An individual of Hornblende encloses a core of Augite, both minerals having the *b* and *c* axes in common; show by sketches the position of the cleavages and their relation to the elasticity axes in each mineral in sections cut parallel to oP, $\infty P\infty$ and $\infty P\infty$.

3. What do you understand by uniaxial and biaxial minerals? How can they be distinguished from one another under the microscope? Which crystallographic systems belong to each of these divisions?

4. Draw out a scheme showing Rosenlusch's classification of the Plutonic rocks with their Volcanic equivalents.

5. What alterations in structure are induced in a mass of granite by crushing? How is this crushing seen to have affected the several constituents of the rock when thin sections are examined under the microscope?

6. Gabbro. Mineralogical composition and structure, Peridotite-Mineralogical composition of the several varieties, structure, most common product of alteration.

7. Describe briefly the following: Nevadite, Domite, Kersantite, Alnoite and Arkose.

8. Describe the successive changes induced in the clay slate on approaching the granite in the case of the celebrated Bar-Andlau contact zone in the Vosges Mountains.

9. Name the ten hand specimens. What structures are exhibited by Nos. 8, 9 and 10?

10. Examine the six thin sections under the microscope. State in each case what minerals are present as well as the name and structure of the rock.

FACULTY OF APPLIED SCIENCE.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

GEOMETRY.

THURSDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. To divide a straight line similarly to a given divided straight line.

Explain how a line may be divided into parts which have the ratio $\sqrt{2} : 1$, $\sqrt{3} : 1$, or $\sqrt{2} : \sqrt{3}$.

2. The vertical angle C of a triangle ABC is bisected by a straight line which cuts the base in D. Show that

(1) $AD : DB :: AC : BC$.

(2) $AD = \frac{AC}{AC + BC} AB$.

(3) $AD \cdot DB + DC^2 = AC \cdot BC$.

3. Any figure described on the hypotenuse of a right-angled triangle is equal to the sum of the similar and similarly described figures on the sides.

4. In a given circle to inscribe a regular hexagon.

$ABCDEF$ is a regular hexagon, show that BF divides AD in the ratio 1 : 3.

5. ABC is any triangle, D, E and F are the middle points of AB BC, CA respectively; show that

(1) $AC^2 + BC^2 = 2 ((AD^2 + DC^2)$.

(2) $3 (AB^2 + BC^2 + CA^2) = 4 (AE^2 + BF^2 + CD^2)$.

6. How must a plane cut a cone, in order that the section may be an ellipse?

What are the foci and directrices of an ellipse? Show that the ratio of the focal distance of a point on the ellipse to the distance from the corresponding directrix is constant and less than unity.

7. In any parabola:

(1) The tangents at the extremities of a focal chord intersect on the directrix.

(2) The subtangent is equal to twice the abscissa.

(3) The rectangles contained by the segments of two intersecting chords are to one another as the focal chords parallel to the given chords.

FIRST YEAR.

TRIGONOMETRY (*First Paper*).—ALGEBRA.

SATURDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Describe the different units used for the measurement of angles, and the method of changing from one system to another.

2. Define the sine, cosine, and tangent of an angle. Explain the changes in their sign and magnitude as the angle increases from 0° to 360°.

3. Find θ by solving the equation

$$4 \sec^2\theta - 7 \tan^2\theta = 3.$$

4. Show that

(*a*) $\sin(180° + A) = -\sin A$, $\cos(180° + A) = -\cos A$,

(*b*) $(\sin A + \sec A)^2 + (\cos A + \operatorname{cosec} A)^2 = (1 + \sec A \operatorname{cosec} A)^2$,

(*c*) $\cos(A + B) = \cos A \cos B - \sin A \sin B$,

(*d*) $\dfrac{\sin 3A + \sin 5A}{\cos 3A - \cos 5A} = \cot A$,

(*e*) $\cot A = \operatorname{cosec} 2A + \cot 2A$,

(*f*) $\tan^{-1}\frac{3}{5} + \cot^{-1}\frac{7}{3} = \cot^{-1}\frac{13}{18}$.

5. Rationalize the denominator of $\dfrac{2\sqrt{5}}{\sqrt{5}-\sqrt{3}}$ and show that $(2-\sqrt{3})^{-3} + (2+\sqrt{3})^{-3} = 52$.

6. Show that

$$\left(\frac{2bc}{b+c} - b\right) \div \left(\frac{1}{c} + \frac{1}{b-2c}\right) + \left(\frac{2bc}{b+c} - c\right) \div \left(\frac{1}{b} + \frac{1}{c-2b}\right) = bc.$$

7. Solve the equations

(*a*) $\sqrt{2x+8} - 2\sqrt{x+5} + 2 = 0$.

(*b*) $\dfrac{x+2}{x-1} - \dfrac{4-x}{2x} = \frac{7}{3}$

(*c*) $\begin{cases} x^3 + y^3 = 189 \\ x^2 y + xy^2 = 180 \end{cases}$

(*d*) $\begin{cases} 3x^2 - 2y^2 = 10 \\ xy = -2 \end{cases}$

FIRST YEAR.

TRIGONOMETRY—(*Second Paper.*)

SATURDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. In any triangle show that:

(1) $\tan \frac{A-B}{2} = \left(\frac{a-b}{a+b}\right) \cot \frac{C}{2}$,

(2) $\sin A + \sin B - \sin C = 4 \sin \frac{A}{2} \sin \frac{B}{2} \cos \frac{C}{2}$.

(3) $c = (a-b) \sec \theta$, where $\tan \theta = \frac{2\sqrt{ab}}{a-b} . \sin \frac{C}{2}$.

2. At a height of h feet above the water, shew that the distance of the visible sea horizon is $\sqrt{1.5h}$ miles, approximately.

3. In the triangles in which

(1) $a = 6053$, $b = 4082$, $c = 7068$,

(2) $a = .062387$, $b = .023475$, $C = 110° 32'$,

(3) $a = 31.23879$, $b = 49.00117$, $A = 32° 18'$,

show that

(1) $A = 58° 41' 48''.94$, $B = 35° 11' 3''.40$, $C = 86° 7' 7''.66$.

(2) $A = 52° 10' 33''$, $B = 17° 17' 27''$, $c = .0739635$.

(3) $B = 56° 56' 56''.3$, $C = 90° 45' 3''.7$, $c = 58.45601$.

or, $B = 123° 3' 3''.7$, $C = 24° 38' 56''.3$, $c = 24.38163$.

SECOND YEAR.

CALCULUS.

THURSDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,..... .....G. H. CHANDLER, M.A.

1. Show that

(1) $d\left(\frac{x^4-1}{x^4+1}\right) = \frac{8x^3\,dx}{(x^4+1)^2}$,

(2) $d\left(\frac{x}{\sqrt{a^2+x^2}}\right) = \frac{a^2\,dx}{(a^2+x^2)^{\frac{3}{2}}}$,

(3) $d\log\left(\frac{e^x}{1+e^x}\right) = \frac{dx}{1+e^x}$,

(4) $d\log\left(\frac{x-a}{x+a}\right) = \frac{2a\,dx}{x^2-a^2}$,

(5) $d\left(\frac{x}{2}+\frac{\sin 2x}{4}\right) = \cos^2 x\,dx$,

(6) $d\sin^{-1}\sqrt{\frac{x-a}{b-a}} = \frac{dx}{2\sqrt{(x-a)(b-x)}}$.

2. Show that $5x - 3y = 4$ is the tangent to the curve $x^3 + y^3 = x^4$ at the point (2,2).

3. Find the asymptote of the curve $x^3 + y^3 = a^3$.

4. Find the point of inflexion on the curve $xy = 1 + x^3$.

5. Explain what is meant by the radius of curvature at any point on a curve, and obtain a formula for calculating it.

6. Show that the isosceles triangle of greatest area which can be inscribed in a given circle is equilateral.

7. Show that

(1) $\int \frac{dx}{(a-x)^4} = \frac{1}{3(a-x)^3}$.

(2) $\int \tan^2 x\,dx = \tan x - x$

(3) $\int_0^{2a} \frac{dx}{\sqrt{2a-x}} = 2\sqrt{2a}$

(4) $\int_0^{\frac{\pi}{3}} \sec^3 x \tan x\,dx = \frac{7}{3}$

(5) $\int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \cos^2 x\,dx = \frac{\pi+2}{8}$

8. Show that the area between the axis of x and

(1) the curve $y(1+x^2) = 1$ is π,

(2) the curve $y = x(1-x^2)$ is $\frac{1}{2}$.

SECOND YEAR.

ANALYTIC GEOMETRY.

SATURDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. On the line joining (2, 3) to (4, —5) find the point of trisection nearest the first point.

2. Where do the hyperbolas $3x^2-2y^2 = 10$, $xy = -2$, intersect? What intercepts do they make on the axes?

3. Find the locus of a point which moves so that its distance from a fixed point is double its distance from a fixed line.

4. The angular points of a triangle are (2, 1), (3, —2), (—4, —1). Show that the triangle is right-angled.

5. Find an expression for the area of a triangle when the co-ordinates of the angular points are given.

6. Find the equation of a circle which touches the line $3x + 2y = 10$ and has the point (5, 3) for its centre.

7. When the co-ordinate axes are turned round through 45° show that the equation

$$(x + y - 2a)^2 = 4xy$$

becomes $y^2 = 2a(x\sqrt{2} - a)$.

8. Find the equation of a parabola passing through the points (0, 0), (3, 2), (3, —2).

9. The normal at the point (x^1, y^1) on an ellipse meets the line joining the foci F, F^1, in N; show that $FN : F^1N :: a - ex^1 : a + ex^1$.

10. From any point on a hyperbola, perpendiculars are drawn to the asymptotes. Prove that the rectangle contained by these perpendiculars is constant.

SECOND YEAR.

MECHANICS.

SATURDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Find the direction and magnitude of the least force which will draw a body up a rough inclined plane.

2. Determine the amount of energy lost on account of friction when an axle turns on friction wheels.

3. Find the centre of gravity

(1) Of a pyramid.

(2) Of a hemispherical surface.

(3) Of a solid hemisphere.

4. State and prove the rule for finding the total pressure of a fluid on a surface.

5. The specific gravity of ice being .9, what would be the volume of 2000 lbs. of ice?

6. What is Boyle's Law? How is it represented by a curve?

7. A cylinder 20 feet long is half filled with water and inverted with the open end just dipping into a vessel of water. Show that the altitude of the water = $7\frac{1}{4}$ ft. (approximately).

8. Give the three laws of motion. Distinguish between pound and poundal, also between kinetic and potential energy.

9. A person drops a stone into a well, and after 3 seconds hears it strike the water. Assuming 1127 feet per second for the velocity of sound, calculate the depth of the well to the surface of the water.

THIRD YEAR.

MECHANICS.

SATURDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner, ...G. H. CHANDLER, M.A.

1. The weight of a balloon is 3000 lbs., that of the air which it displaces is 3600 lbs.; how far will the balloon rise in 5 seconds?

2. A hammer weighing 10 lbs. falls from a roof 80 feet high. If it strike an unyielding body, how much heat is developed?

3. Prove that the product of the pressure and volume of a mass of gas is proportional to the absolute temperature.

4. The mercury rises in the barometer gauge of an air pump through $6\frac{1}{2}$ inches in 8 strokes. Show that the volume of the barrel is .031 of that of the receiver.

5. Explain the method of calculating the velocity of efflux of liquids and gases through small orifices.

6. Find the horizontal range and greatest height of a body which is projected with a given velocity and given inclination to the horizon.

7. A body is whirled round by a string in a vertical circle. Prove that the tension of the string at the lowest point is at least six times the weight of the body.

8. A cylinder of radius a and depth b is filled with water and made to revolve until half of the water is thrown out. Show that the angular velocity $= \frac{1}{a}\sqrt{2gb}$.

9. A sphere of radius r is placed on a rough inclined plane, the co-efficient of friction being μ; it is found that the sphere is on the point both of rolling and sliding down the plane. Show that the distance of the centre of gravity from the centre $= \frac{\mu r}{\sqrt{1+\mu^2}}$

THIRD YEAR.

SPHERICAL TRIGONOMETRY AND PRACTICAL ASTRONOMY.

THURSDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M.A.

1. If $2S = A + B + C$ (the three angles of a spherical triangle), show that cos S is always — and cos $(S-A$ always +.

2. In any right-angled spherical triangle ($C = 90°$).

$$\sin A = \frac{\sin a}{\sin c}, \quad \tan A = \frac{\tan a}{\sin b}.$$

3. Explain the meaning of Napier's circular Parts, and enunciate Napier's Rules for the solution of spherical right-angled triangles.

4. In any spherical triangle

$$\cos \frac{A}{2} = \sqrt{\frac{\sin s \sin (s - a)}{\sin b \sin c}}$$

5. What is meant by "ecliptic," "zodiac," "right ascension," "declination," "parallax?"

6. Explain carefully "mean sun," "mean time," "sidereal time." Find the sidereal time at 10 a.m. Montreal mean time to-day.

7. Explain two methods of finding the error of a chronometer, two of finding latitude, and one of finding longitude.

8. The altitude of the pole star at $10h.\ 25m.$ local sidereal time, April 8th, 1891, is 47° 29′ 35″, find the latitude of the place of observation.

B.A. Sc. EXAMINATION.

SPHERICAL ASTRONOMY, &c.

SATURDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. In any spherical triangle

$$\sin b \sin C\, dA = da - \cos C\, db - \cos B\, dc,$$

$$\sin B \sin c\, da = dA + \cos c\, dB + \cos b\, dC,$$

$$\cot b\, db - \cot c\, dc = \cot B\, dB - \cot C\, dC.$$

Hence show that

$$d\delta = -\cos q\, d\zeta + \sin q \sin \zeta\, dA + \cos t\, d\varphi.$$

2. Write down and explain a formula for interpolation by differences of any order.

3. In connection with the method of Least Squares, explain "equations of condition," "normal equations," and "probable error."

4. The length of the radius of the terrestrial spheroid for a latitude ϕ is

$$a \sqrt{\frac{1 - 2e^2 \sin^2 \phi + e^4 \sin^2 \phi}{1 - e^2 \sin^2 \phi}}.$$

5. If *Arcturus* be observed to have equal altitudes at $10h.\ 55m.\ 36.4s$ and $17h.\ 30m.\ 29.6s.$ by a sidereal chronometer to-day, find the chronometer correction.

6. Find the Montreal mean time when the right ascension of the moon is $9h.\ 27m.\ 30s.$ in March, 1891.

7. Show how the hour angle, zenith distance and parallactic angle of a given star on the prime vertical of a given place may be found.

8. Explain the method of finding latitude by reduction of an altitude to the meridian, the time of observation being known, showing that

$$\cos \zeta_1 = \sin h + \cos \phi \cos \delta \ (2 \sin^2 \frac{t}{2}).$$

9. The true altitude of Polaris is $50°\ 25'\ 35''$ at $8h.\ 50m.$ mean time to-day. The longitude being 8h. W., find the latitude.

10. Explain fully the method of obtaining longitude by moon culminations.

FIRST YEAR.

ENGLISH COMPOSITION.

MONDAY, APRIL 6TH:—MORNING, 9 TO 11.

Examiners,..... .... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. Distinguish between: allude and refer; beside and besides; flee and fly; manual and handbook; luxurious and luxuriant; proposal and proposition; still (adv.) and yet.

2. State and illustrate the correct use of each of the following words, and make brief notes on common misuse of each:—quantity, transpire, party, loan, except, elegant, directly, constantly, balance (noun).

3. (*a*) Write two sentences of at least two lines in length, using simple words to express the meaning conveyed; (*b*) express the same thoughts in language much less simple.

4. Write an essay of at least one page and a half in length on any one of the following subjects:—

A. Ghosts.

B. Great Explorers.

C. Procrastination.

SECOND YEAR.

ENGLISH COMPOSITION.

WEDNESDAY, APRIL 8TH:—MORNING, 9 TO 11.

Examiners..... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. Explain carefully the distinction between who or which and that (rel. pron.). Write sentences in illustration.

2. Improve the following, and give reasons for changes:—

(*a*) If the cavern were of artificial construction, considerable trouble had been taken to make it seem natural.

(*b*) We would have liked to have seen him sooner than his friend.

(*c*) The book is now in my possession, having purchased it for my library.

(*d*) It is no use you trying and seeing him.

(*e*) She might, between every stitch, look in the street at the passers-by.

(*f*) If, following the example of our neighbours, we are not inclined to declare a republic, we must, etc.

(*g*) To dictate and to allow themselves to be dictated to became natural to the man and his servants.

3. Name and illustrate the most frequent mistakes connected with the use of three common propositions and two conjunctions.

4. Write an essay of at least two pages on any one of the following subjects:—

A. Popular Superstitions.
B. The Possible Future of Electricity.
C. The Ideal Scientific Man.

THIRD YEAR.

ENGLISH COMPOSITION.

WEDNESDAY, APRIL 8TH:—MORNING, 9 TO 12.

Examiners,..... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, M.A.

1. State the principal means and methods of Amplification, and fully illustrate any one.

2. Contrast Circumstantial Description with Dynamic Description; shew the use of each with the help of an illustrative example.

3. What is meant by the *movement* of a narrative? Illustrate your remarks with examples taken from history and fiction.

4. Explain briefly with illustration:—Obverse Iteration, Argument from Analogy, Refutation, Demonstrative Oratory.

5. Write an essay on any one of the following subjects:—

A. Scientific Evidence.

B. Travelling, Ancient and Modern.

C. Arbitration in International Disputes.

FIRST YEAR.

SANITATION.

SATURDAY, MARCH 7TH:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.INST. C.E. / R. P. FLEMING, M.CAN. SOC. C.E.

1. Describe briefly the essential features of a good system of house drainage suitable to this climate.

2. What are the necessary qualities in a fire-clay pipe to be used for house drainage? What are the objections to the use of such pipes for the interior drains of a house? How should the joints be made?

3. Why is iron preferred to all other materials for interior drainage? What are the disadvantages, if any, of using iron piping as compared with fire-clay pipes?

4. What is the objection to a house drain being much larger than is necessary to carry off the sewage?

5. What factors affect the velocity of flow in a house drain? What is the least admissible fall of the drain? What is the least admissible diameter, and why is this limit fixed if a smaller pipe would carry off all the sewage and rainfall?

6. What are the objections to the use of small sized wrought-iron pipes for baths, basins, etc.?

7. Enumerate four ways by which water-sealed traps become ineffective. What are the requisites for a good form of water-seal trap for the waste pipes of plumbing fixtures?

8. What is meant by syphonage? How is it best prevented? What are the objections to the majority of the patent "anti-syphon" traps?

9. Give reasons in favour of the insertion of a trap on the main drain of a house between the latter and the public sewer; and state how it should be done.

10. Describe Field's automatic flushing tank for drains.

11. Comment, in detail, upon the arrangement shewn by the accompanying sketch, and shew by another sketch how you would rectify it.

12. What are the relative advantages of introducing fresh air into a room at the level of the floor and at the level of the ceiling?

13. What is meant by natural ventilation? What by mechanical ventilation? In what respects, apart from the cost, has the latter proved greatly superior to the former?

14. A hall is seated for 200 persons, and ventilation is provided through *ten* tubes terminating in gratings in the floor, through which fresh air is delivered at the rate of 20,000 cubic feet per hour per person. The openngs and tubes are all of equal size, and are uniformly distributed over the floor-space. What should be the area of each in order to avoid unpleasant draughts?

SECOND, THIRD AND FOURTH YEARS.

MATERIALS.

SATURDAY, MARCH 7TH:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., M. INST. C.E.
JOHN KENNEDY, M. INST. C.E.

1. State the effect of the presence of the following substances in a clay to be used for bricks:—
Alumina; soda; potash; sand; lime.

2. Distinguish between Pure Clays, Loams and Marls, and discuss the suitability of each for brick-making.

3. Describe, with sketches, the process of burning bricks in *clamps*.

4. Point out the advantages and disadvantages of Hoffman's kiln.

5. What is Roman cement? How is it made? What are its special characteristics? What precautions must be observed in its use?

6. State *four* methods of making *hydraulic* cement? To what is it that cements chiefly owe the property of hardening under water? How could its hydraulicity be restored to a cement which has been repulverized and pasted after having once set?

7. Describe the "dry process" of manufacturing Portland cement? In what does it differ from the "wet process"?

8. What quality of Portland cement might be expected when the clinkers are a dark greenish black, bright yellow, pink, or dark-blue?

9. Write out a specification for (*a*) Portland cement, (*b*) Roman cement, and (*c*) Concrete for submerged work.

10. Give Vicat's classification of hydraulic limes.

11. How is lime affected by the presence of carbonate of lime, sand, clay and carbonate of magnesia?

12. Describe, with sketches, an ordinary lime-kiln, and explain how it is charged.

13. Describe the composition of granite? What are the minerals which give this rock both character and hardness? How is a granite affected by the presence of hornblende? Explain the character of the decay to which a granite is liable.

14. Distinguish between a sandstone, a conglomerate and a pudding-stone. State any circumstances which influence the durability of a sandstone when used for building purposes.

THIRD AND FOURTH YEARS.

THEORY OF STRUCTURES. (*Paper I.*)

MONDAY, MARCH 30TH:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M. INST.C. E., M.A.

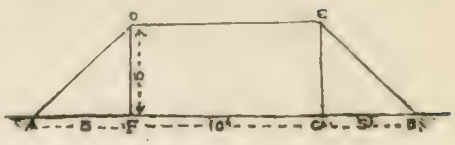
1. Shew that the point of intersection of the first and last sides of the funicular polygon of a system of forces in one plane is a point on the actual resultant of the forces.

The accompanying diagram represents in section a retaining wall for a reservoir. Determine *graphically* the position of the centres of pressure in the planes 11, 22, 33,... when the reservoir is empty.

2. A girder of 20-ft. span, resting upon supports at the ends, carries loads of 1, 1, $\frac{1}{4}$ and $\frac{1}{4}$ ton, at points distant 2, 7, 13 and 18 ft., respectively from one end.

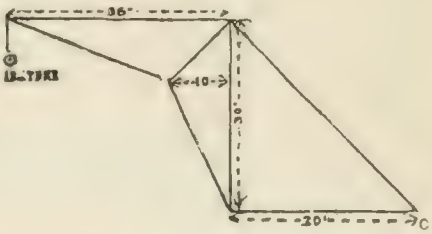
Draw to *scale* shearing force and bending moment diagrams, and give the value of the max. shear (both positive and negative) and the max. bending moment.

3. Why is the frame represented by the Figure incomplete? With a load 2 W at F, shew that the member A B is subjected to the action of a couple of moment W. F G. How would you complete the frame?

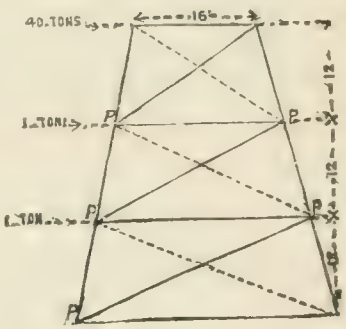


Draw the stress diagram for the complete frame when there is a weight of 1 ton at F, $\frac{1}{2}$ ton at G, and a horizontal force of $\frac{1}{4}$ ton at D, assuming that the end A is *fixed* and that B rests upon rollers.

4. Find the stresses in the members of the crane represented by the Figure; also find the balance weight at C.



5. The Figure represents one-half of a trestle for a viaduct. The trestle is divided into 3 panels each 12 ft. high; width at top=16 ft., at bottom=32 ft.; wind produces a horizontal pressure of 40 tons at top, and a horizontal pr. of 1-ton at the intermediate panel points; the dead weight upon the half trestle 60-tons; weight of trestle equivalent to 4-tons at the panel points p; assuming the trestle to be an articulated structure and that the dotted diagonals are too flexible to resist compressive forces, determine, *graphically*, the stresses in the several members, and designate which are in compression and which in tension.

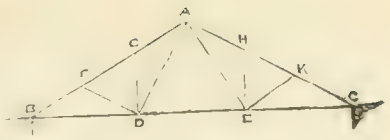


6. Two equal rafters A B, A C, for a roof of 12 ft. span and 3-ft. rise are spaced 3-ft. centre to centre; the weight of the roof covering 20-lbs. per sq. ft.; find the vertical pressure and outward thrust at the foot of a rafter.

7. In a mansard roof of 12-ft. rise, the upper triangular portion (of 4-ft. rise) has its rafters inclined at 60° to the vertical. The rafters of the lower portion are inclined at 30° to the vertical. If there is a load of 1000-lbs. at the ridge, find the load necessary at each intermediate joint for equilibrium, and also find the thrust of the roof.

A load of 2000-lbs. is concentrated at each of the intermediate joints, and a brace is inserted between the joints; find the stress in the brace.

8. In the accompanying roof-truss of 90-ft. span, the pitch=30°; the tie-rods B D, D A, D E, E A, E C are equal, and the struts D G, D F, E H, E K are also equal, D G and E H being vertical; the dead load at each of the points F, G, A, H, K is 2000-lbs.; draw a stress diagram, and give the amount of the stress in each member.



Shew how the diagram will be modified if the strut D'F is removed and the load at F equally distributed between B and G.

9. Draw the stress diagram for the truss in the last question when the wind produces a pressure normal to the rafter A B of 3000-lbs. at each of the points A and B and of 6000-lbs. at each of the points F and G.

10. A horizontal girder A B of 30-ft. span rests upon a support at A is *fixed* at B, and is hinged at a point C dividing A B into segments A C=10-ft., and B C=20-ft. Draw, *to scale*, shearing force and bending moment diagrams when the load upon the girder is, (*a*) a uniformly distributed weight of 30-tons, (*b*) a weight of an intensity varying uniformly from *nil* at A to 2-tons at B.

THIRD YEAR AND B.A.Sc. EXAMINATIONS.

THEORY OF STRUCTURES. (*Paper II.*)

WEDNESDAY, APRIL 1ST, 1891:—MORNING, 9 A. M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST C.E.

1. Define the meaning of the terms coefficient of elasticity, limit of elasticity, set, resilience, and explain their relation to the strength of structures.

Shew that the working resilience of a bar of volume V is $\frac{f^2 V}{2 E}$ f being the working intensity of stress and E the coefficient of elasticity.

Compare the resilience of a bar of sectional area a with that of a bar of the same material and same total length, but made up of three portions of equal length whose sectional areas are a, $2a$, $3a$.

2. Shew that the moment of friction due to the rotation of a hollow cylindrical pivot of external diar. d_1 and internal diar. d_2 is

$$\frac{\mu Q}{3} \cdot \frac{d_1^3 - d_2^3}{d_1^2 - d_2^2},$$

Q being the pressure upon the pivot and μ the coefficient of friction.

3. What is meant by mechanical advantage? Determine the mechanical advantage of a screw with a square thread.

How will the result be affected when the friction at the end of the screw and between the nut and its seat is taken into account?

4. State Gordon's formula, and explain Rankine's modification of the same.

A solid round wrought-iron pillar, 12 feet high, with two pin ends, has to carry a load of 10,000 lbs.; find its diar., 10 being a factor of safety.

($f = 36{,}000$ lbs., $\frac{l}{a} = 2{,}250$.)

If the line of action of the load is $\frac{1}{10}$ in. from the axis of the pillar, find the maximum intensity of stress in the material of the pillar.

5. A belt embraces an arc of a pulley, subtending an angle α at the centre. If T_1, T_2 are the tensions of the driving and slack portions of the belt, respectively, shew that

$$\frac{T_1}{T_2} = e^{\mu\alpha}$$

μ being the coefficient of friction.

A belt, embracing one-half the circumference of a pulley, transmits 10 H.P.; the pulley makes 30 revolutions per minute and is 7 feet in diar.; neglecting slip, find T_1 and T_2. $\mu = .1\ 25$

6. Prove the relations

$$M = \frac{fy}{y} . I = \frac{E}{R} I.,$$

and state the assumptions upon which they depend.

A double-flanged cast-iron girder has a sectional area of 93 sq. ins.; the web is 1 inch thick and 21 ins. deep; the moment of resistance of the section is 100950 ft. lbs.; the coefficients of strength are 2100 lbs. per sq. inch in tension and 5250 lbs. in compression; find the position of the neutral axis and areas of the two flanges.

7. Explain the term "*centrifrugal force.*"

A shaft, $5\frac{1}{2}$ ins. deep $\times$ 5 ins. wide $\times$ 98 ins. long, has one end absolutely fixed, while at the other a wheel turns at the rate of 270 revolutions per minute; a weight of 200 lbs. is concentrated in the rim, its $C.$ of $G.$ being $2\frac{1}{2}$ feet from the axis of the shaft; find the maximum stress in the material of the shaft, and also find the maximum deviation of the shaft from the straight, E being 27,000,000 lbs.

8. Compare the strength of a beam of T-section with the strength of the same beam when inverted, the web and flange being each 4 ins. $\times \frac{1}{2}$ inch. Also determine the ratio of the maximum to the average intensity of shear.

9. If b_e is the breadth of a beam which has to carry an external load W_e, the weight B_e of the beam being disregarded, shew that the breadth when the latter weight is taken into account $= \frac{W_e be}{W_e - B_e}$. What will be the weight of the new beam?

10. What is meant by the stiffness of a beam? How may it be measured? If the stiffness and strength are to be of equal importance, shew that the ratio of the *span* to *depth* is

$$= \left(\frac{D}{l}\right) \cdot \frac{q\,E}{p \cdot f}.$$

A rolled beam with equal flanges and a web whose section is equal to the joint section of the flanges has a span of 24 feet, and carries a weight of 8 tons at the centre; if the stiffness is .001 and if the coefficient of strength per sq. in. is 5-tons, find the depth of the beam and the web and flange sectional areas.

11. A wall $A\,B\,C\,D$ of rectangular section retains water on the face $A\,B$ level with the top. The width AD is 4 feet, and the centre of pressure in BC is 1.7 feet from the middle point. Find the height of the wall and the maximum intensity of pressure in BC.

If the portion $ABCD$ is built upon another rectangular portion $BEFG$, the width BG being 5 feet, and ABE being in the same vertical plane, find BE, so that the maximum intensity of stress in EF may not exceed the maximum intensity in BC.

12. A shaft of diameter d is subjected to the combined action of a twisting couple (M_t) and as bending moment (M_b), shew that

$\pi d^3 \times$ (max. intensity of longitudinal stress) $= 16\,(M_b + \sqrt{M^2_b + M^2_t})$

and $\pi\, d^3 \times$ (max. intensity of shear) $= 16.\,\sqrt{M^2_b + M^2_t}$

The pull upon the pin of a 20-ins. crank is 176400 lbs., the distance between the crank and the middle point of the shaft's bearing is 12-ins.; find the diameter of the shaft, taking 11200 lbs. per sq. in. as the safe shearing intensity.

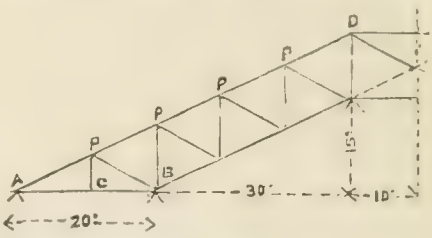
B.A.Sc. EXAMINATION.

THEORY OF STRUCTURES. (*Paper III.*)

MONDAY, APRIL 6TH:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST. C.E.

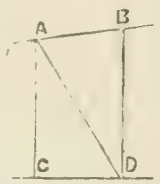
1. The Fig. represents one-half of a roof truss carrying a symmetrically distributed dead load, and supported at the points A and B, the vertical reactions at these points being equal. The dead load is 500 lbs. at each of the points p and D: the wind produces a normal pressure of 1000 lbs. upon the side AD at the points p, and a normal pressure of 500 lbs. at each of the points A and D; the horizontal reaction is equally divided between the supports at A and B.



Draw, to *scale*, a stress diagram. Shew how the diagram will be modified if a weight of 1000 lbs. is concentrated at C.

2. Deduce an expression giving the maximum stress in a diagonal of a bowstring truss with isosceles bracing due to a live load of uniform intensity.

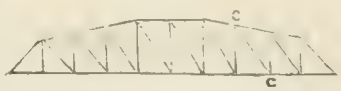
3. The Fig. represents a portion of a truss of span l, with inclined upper chord and horizontal lower chord, between the r^{th} and $(r+1)^{th}$ verticals. For a given distributed load, D is the stress in the diagonal AD lying between the r^{th} and $(r+1)^{th}$ weights. If the weights now all travel through a distance x, so that q weights are transferred from one side of the diagonal to the other, shew that the new stress in the diagonal will be greater or less than D, according as



$$Rq \cdot (h + l) \gtrless W_n \frac{x}{l} + x\,(W_r + T),$$

h being the distance between C and the point in which BA produced meet the horizontal chord produced, W_r the sum of the first r weights, W_n the sum of all the weights on the truss, T the total weight transferred, and $Rq \cdot (h + l)$ the reaction at the left support due to the weight transferred.

4. The Fig. represents a bridge of 240 feet span: lengths of three central verticals=40 feet; length of end verticals=27 feet; the live load is as per accompanying diagram; the panel bridge load = 27,000 lbs.; determine the distribution of the live load, giving the maximum stresses in the members met by a vertical section in the 4th panel.



Shew that the counterbrace CC is not required.

B.A.Sc. EXAMINATION.

THEORY OF STRUCTURES. (*Paper IV.*)

FRIDAY, APRIL 10TH :—9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M.INST.C.E.

1. A platform carrying a specified load is suspended from chains composed of a number of straight links; shew how to trace the curve of a chain.

A light suspension bridge carries a foot-path 8 ft. wide, over a river 90 ft. wide, by means of 8 equidistant suspending rods, the dip being 10 ft. Each cable consists of 9 straight links, find their several lengths. If the load upon the platform is 120 lbs. per sq. ft., and if *one-fourth* of this load is borne by the piers, find the sectional areas of the several links, allowing 10,000 lbs. per sq. in.

2. The cables for a suspension bridge of 1,270 ft. span, have a dip of 91 ft.; the stiffening trusses are hinged at the centre; the dead load = 2,000 lbs per lineal ft. = the live load; there are 156 suspenders on each side; find the pull upon a suspender when the live load covers one-half the bridge. Also find the *max.* shear and bending moment on the truss for the same distribution.

3. A suspension cable has a length s from its lowest point to the point of suspension; a is the corresponding horizontal projection of s; H is the horizontal pull at the lowest point, and T is the tension at the point of suspension; W_1 and W_2 are the weights of lengths a and s of the cable designed respectively to bear the tensions H and T; shew that if the cable is proportioned to the pull at every point, its weight is an arithmetic mean between W_1 and W_2, very nearly.

4. Deduce the general conditions of equilibrium for an arched rib with both ends hinged.

An arched rib, with parabolic axis of 96 ft. span and 16 ft. rise, has both ends hinged, and is loaded with weights of 2, 3, 4 tons at horizontal distances of 24, 48 and 72 ft., respectively, from a support. Find the shears and axial thrusts at these points.

B. A. Sc. EXAMINATION (*Advanced Course*).

THEORY OF STRUCTURES.

SATURDAY, APRIL 11TH :—MORNING, 9 A. M.

Examiner,.....HENRY T. BOVEY, M.A., M. INST. C.E.

1. A parabolic rib of uniform depth and stiffness is hinged at both ends, and carries a load of intensity w per horizontal unit of length. When a

live load of intensity w^1 per horizontal unit of length covers one-half the rib, show that the horizontal thrust

$$\frac{\left(w + \frac{w^1}{2}\right) l}{8 k \left(1 + \frac{15}{8} \frac{I}{A_1} \frac{1}{k^2}\right)}$$

How will this result be affected by hinging the rib at the crown?

2. Enunciate the Theorem of Three Moments in its most general form.

A continuous girder of two spans, each of 50-ft., has one of its ends *fixed* to the support; the load upon the girder is 1000 lbs. per lineal ft.; find the reactions and moment of fixture. How much must the intermediate support be lowered so that it may bear *none* of the load? How much should the free end support then be lowered to bring upon the supports the same loads as before? (I = 5000, E = 25,000,000)

3. Deduce the relation,

$$P = E \frac{I \pi^2}{l^2},$$

for a pillar hinged at both ends, stating all the assumptions you make.

If y is the horizontal deviation from the vertical of a point of the axis of the pillar at which the tangent is included at θ to the vertical, shew that

$$E I (\cos \theta - \cos \phi) = \frac{P y^2}{2}$$

ϕ being the value of θ at the end of the pillar.

4. In a hollow cylinder of external radius $n r$ and internal radius r, subjected to an external pressure p_1 and an internal pr. p, show that the *radial* and *circumferential* intensities of stress in the metal at a distance x from the axis are

$A - B$ and $A + B$ respectively, where $A = \frac{p - n^2 p_1}{1 - n^2}$ and $B = \frac{p - p_1}{x^2} \cdot \frac{r^2}{1 - n^2}$

Also shew that the work done in stretching the cylinder circumferentially is

$$\frac{6 p^2 r n^2 + 1}{E n^2 - 1} \text{—ft. tons.}$$

p_1 being *nil* and p the pr. in tons per sq. ft.

5. A cantilever of 12 ft. span, is of *uniform strength* and width; find its max. deflection, and the *work done* in bending when the load upon the cantilever is 2000 lbs. uniformly distributed, the coeff. of strength being 1000 lbs. per sq. in.

B.A.Sc. EXAMINATION.

HYDRAULICS. (*Paper I.*)

FRIDAY, APRIL 17TH :— MORNING, 9 A. M.

Examiner,..... .....HENRY T. BOVEY, M.A., M.INST.C.E.

1. Explain the meaning of the terms co-efficient of resistance, co-efficient of velocity, co-efficient of contraction, and co-efficient of discharge.

The water in a cylindrical cistern of 144 sq. ins. sectional area is 16 ft. deep. Upon opening an orifice of 1 sq. in. in the bottom, the water fell 4 ft. in 1 minute; find the co-efficient of discharge. The co-efficient of contraction being ·625, find the co-efficients of velocity and resistance.

2. Shew that the co-efficient of contraction in the case of Borda's mouth-piece is $\frac{1}{2}$.

3. Prove that the *maximum* discharge through a divergent mouth-piece into the air is $A_1 \sqrt{2\,g\,(h + H)}$.

H being the height of the water barometer, h the head of water above the axis of the mouth-piece, and A_1 the area of the "contracted" section.

4. Deduce an expression for the discharge through a partially submerged rectangular opening in a vertical plane.

Water approaches a rectangular opening 2 ft. wide with a velocity of 4 ft. per sec. At the opening the head of water over the lower edge = 13 ft., and over the surface of the tail-race = 12 ft.; the discharge through the opening is 70 cub. ft. per sec.; find the height of the opening.

5. What is meant by hydraulic mean depth?

The section of a culvert is an isosceles triangle ABC, the angle A being 90° and BC horizontal. If the culvert is running half-full, find the hydraulic mean depth in terms of BC, (*a*) when BC is at the bottom, (*b*) when BC is at the top.

6. State the Laws of Fluid Friction.

7. Deduce a formula giving the discharge through a pipe of given length and diameter under a given head.

Two reservoirs, with their water surfaces 300 ft. and 100 ft. above datum, are connected by a 6 ins. pipe, 6,000 ft. long. How high above datum will the water rise in a piezometer half-way between the reservoirs, assuming that the pipe is connected with the upper reservoir by a funnel-shaped tube, so that there is no loss of head at entrance?

Draw, *to scale*, the plane of charge ($f = .0064$).

8. A reservoir has a horizontal uniform sectional area of 10,000 sq. ft., and discharges through a square pipe of 4 sq. ft. area and 1,000 ft. long.

Find the time in which the water level will fall 60 ft., the initial head over the axis of the pipe being 100 ft.

9. Water flows along an open channel, 12 ft. wide and 4 ft. deep, at the rate of 2 ft. per sec. What is the fall? A dam 12 ft. by 3 ft. high is formed across the channel; how high will the water rise over the crest of the dam?

10. Explain how to compute the discharge through a pipe with a nozzle.

B. A. Sc. EXAMINATION.

HYDRAULICS. (*Paper II.*)

FRIDAY, APRIL 17TH :—AFTERNOON, 2 P.M.

Examiner, ... HENRY T. BOVEY, M.A., M. INST. C.E.

1. Describe the principle and action of the Venturi water meter, and deduce an expression for the discharge.

2. A stream of 48 sq. ins. transverse section delivers 6 cubic ft. of water per sec. against a plane surface inclined at 45° to the direction of the jet, and drives the vane in the direction of the normal with a velocity of 9 ft. per sec.; find the pressure on the vane, the work done per sec. and the efficiency.

3. A stream 2 ins. thick and 12 ins. wide is received, *without shock*, by a vane in the form of a quadrant of a circle. The stream delivers $2\frac{1}{2}$ cubic ft. of water per sec., and the vane moves in the direction of the jet with a velocity of 10 ft. per sec.; find the pressure and work done on the vane.

4. What are the fundamental requirements which every water-motor must fulfil to ensure a high efficiency?

5. Show how to determine the mechanical effect of a breast-wheel.

6. In an overshot wheel the deviation of the impinging water from the direction of motion of the wheel is 10°; the velocity (v_1) of the impinging stream=15 ft. per sec.; of the circumference of the wheel (u)=15 cos10°; what proportion of the head is sacrified?

7. A 30 ft. water-wheel with 72 buckets and a 12 ins. shrouding, makes 5 revolutions and receives 240 cubic ft. per minute; find the width and sectional area of a bucket. The fall is 30 ft.; at what point does the water enter the wheel, the inflowing velocity being $1\frac{1}{2}$ times that of the wheel's periphery? Also find the deviation of the water surface from the horizontal at the point at which discharging commences, *i. e.*, 140° from the summit.

8. Describe the principle and action of the "hurdy-gurdy" wheel.

B.A. Sc. EXAMINATION.

HYDRAULICS. (*Advanced Course.*)

SATURDAY, APRIL 18TH :—9 A.M.

Examiner, ...HENRY T. BOVEY, M.A., M.INST. C.E.

1. In order that the efficiency of a turbine may be a maximum, shew that,

$$u_1^2 = g\,H.$$

If the turbine be of the inward-flow type, and if $r_1 = 2r_2$ and $4d_1 = 3d_2$; find the vane angles, the fall being 64 feet.

2. Give Bazin's Theory of the variation of the velocity in the cross-section of a uniform stream, clearly stating all the assumptions, and shew that the difference between the mid-depth and mean velocities is $\frac{w.i\,h}{24\,k}$

w being the specific weight of the water, i the slope, h the depth of the stream, and k a co-efficient.

3. Assuming that the whole of the discharge in a main is absorbed in way service, and that the way service is proportional to the distance from the reservoir, shew that the line of charge is approximately a cubical parabola.

4. Find the height to which the water must rise in a culvert of an isosceles triangular section ABC, so that the velocity of flow may be a maximum ; the angle A is $90°$, and the bottom BC is horizontal.

5. Three reservoirs are connected by a branched pipe; discuss the distribution of the flow.

6. For a given discharge (Q) and head (H), and considering only the losses of head due to flow and to the resistance in the wheel, shew that the maximum efficiency of a centrifugal pump is

$$1 - A\,\frac{D^2.H^{\frac{1}{2}}}{Q},$$

A being a constant depending on the size of the wheel.

B.A. Sc. EXAMINATION.

DESIGNS.

Examiners,..... { HENRY T. BOVEY, M.A., M.INST. C.E.
C. A. CARUS-WILSON, B.A.
JOHN KENNEDY, M.INST. C.E.

1. (*a*) Braced Iron pier, 192 ft. high, to carry the ends of bridge trusses of 184-ft. span.
(*b*) Double-Intersection Bridge truss of $184\frac{1}{6}$ ft. span.

2. (*a*) Single track viaduct on braced iron piers 50 ft. high.
(*b*) Combination iron and timber roof of 79 ft. span.

3. (*a*) Combination iron and timber roof of 79 ft. span.
(*b*) Single intersection steel bridge truss of 79 ft. span.

4. (*a*) Combination iron and timber roof of 60 ft. span.
b) A Howe truss of 192 ft. span.

5. (*a*) Five-Stamp Quartz Mill.
(*b*) Blast Furnace.

6. (*a*) Puddling Furnace.
(*b*) Horse Whim.
7. Compound Pump.

SECOND YEAR.

MECHANISM.

Examiner,..... .....C. A. CARUS-WILSON, B.A., A.M.INST.C.E.

1. Show how to find the velocity of a point in a moving link when its locus is given, the velocity and locus of another point in the same link being known.

2. Obtain an expression for the error due to obliquity in the direct acting engine.
If the crank of an engine is 3′ and rod 9′ long, find the angle which the crank makes with the vertical when the piston is at half stroke.

3. Find the relative angular velocities of the turning pairs in the slider crank chain, and show how they may be employed to produce at least two forms of quick return motion.

4. In Whitworth's quick return motion, find the proportions so that the maximum return may be $3\frac{1}{2}$ times the maximum cutting velocity. Compare the times of cutting and return.

5. Prove that in the double slider crank chain with the crank fixed (Oldham's coupling) the angular velocities of the two turning pairs are equal.

6. Prove that a mathematically straight line can be drawn by Peaucellier's link work.

7. In a double slider crank chain the cross block is fixed, and the crank, which is one inch long, has a pencil fixed at a distance of one inch from one end, measured along its length. If the pencil move with a constant velocity of 3″ per second, find the velocity of the sliders when the crank makes 45° with the cross block.

8. Show how to design a mechanism by means of which you could turn a bar of elliptical section in a lathe.

THIRD AND FOURTH YEARS.

DYNAMICS OF MACHINERY.

Examiner,..... ... . C. A. Carus-Wilson, B.A., A.M.I.C.E.

1. Verify the Principle of Work in the case of the direct acting engine.

2. A copper disc rolls along a horizontal plane, and passes onto an incline of 1 in 20 without shock. If the incline is 200 feet long, find the velocity with which the disc must commence the ascent in order to reach the top. [The radius of gyration of a disc of radius r rotating about its axis is $\frac{r}{\sqrt{2}}$.]

3. A train weighing 260 tons, running at 60 miles an hour, is pulled up by a vacuum brake in 2100 feet on a level. Find the retarding force in percentage of gross load.

4. Assuming the equation for the velocity of a piston at any point of its stroke, find an expression for the pressure due to inertia at the beginning and end of the stroke for a short rod.

5. The vertical scale of the accompanying indicator diagram is $\frac{1}{32}$ = one pound per sq. inch. The piston diameter is 14″. The pressure due to inertia is 37 lbs. per sq. inch at the beginning of the stroke for an infinite rod, but here the rod equals 4 cranks. The mean effective pressure for one revolution is 42.2 lbs. per sq. inch.

Construct a linear curve of crank effort on a base line $5\frac{1}{2}$″ long. Find the maximum crank effort in pounds. Draw the curve of mean crank effort, and explain how you would proceed to find the fluctuation of energy.

6. An engine indicating 130 horse-power makes 40 revolutions per minute. The fluctuation of energy is 16 per cent., find the weight in tons of a fly-wheel 18′ in diameter, so that the fluctuation of speed may not exceed $\frac{1}{30}$th.

7. A vertical engine running at 450 revolutions per minute has two single acting cylinders side by side with 18″ between centre lines. The stroke is 7″, diameter of each cylinder 12″; rod = cranks; reciprocating weight for each cylinder 220 lbs.

Find the couple (in foot-pounds) tending to rock the engine. How can this be balanced?

Find also the resultant thrust on the foundations at the end of each stroke, and explain how it might be reduced.

8. An inside cylinder locomotive running at 40 miles an hour has driving wheels 5′. 6″ in diameter, and 4′ 6″ apart. The cylinders have a stroke of 2 feet, and are 2′. 6″ between centre lines. The recipocrating masses are equivalent to a revolving weight of 350 lbs.

Find the mass and position of suitable balance weights, the diameter of the balance weight circle being 4 feet.

B. A. Sc. EXAMINATION.

THERMODYNAMICS.

THURSDAY, MARCH 26TH:—MORNING, 9 TO 12.

Examiner.....C. A. CARUS-WILSON, B.A., A.M.I.C.E.

1. Give reasons for believing Heat to be a form of Energy.

Describe Joule's experiment for determining the Mechanical Equivalent of Heat by the stirring of water, and give the results he obtained.

2. Define Isothermal and Adiabatic expansion.

Give an account of Stirling's Hot Air Engine, and show how its ideal indicator diagram differs from that of Carnot's engine: Find its maximum possible efficiency when working between the temperatures 600° F. and 120° F. What efficiency is actually obtained in the best forms of hot air engines? To what do you attribute the loss?

3. Define the Latent Heat of Steam.

Describe an experiment for determining this quantity.

Give the results arrived at, and state how they vary with increased temperature.

4. Discuss Colburn's theory of boiler explosions.

5. A Horizontal Condensing Engine running at 70 revolutions per

minute has a stroke of 30 inches and a cylinder diameter of 14 inches. The boiler pressure is 80 lbs. per sq. inch, but the effective pressure on the piston is reduced by 10% owing to wire drawing. The back pressure is 3 lbs. per sq. inch; the clearance is 10%.

Find, in 16ths of the stroke, the cut-off to which the expansion gear must be set in order that the engine may indicate 80 Horse Power.

6. Describe the action of a Meyer Expansion Valve.

Design a Meyer Valve to cut off at $\frac{3}{8}$ ths, with the following data: Throw of main valve 2″; outside lap $\frac{7}{8}$″; port opening in cylinder $1\frac{1}{2}$″; do. in main valve $1\frac{1}{8}$″; inside lap $\frac{3}{4}$″; lead $\frac{1}{4}$″; throw of expansion valve 2″; expansion eccentric set in line with main crank; neglect the shortness of the connecting rod.

7. The engine described in question 5 is fitted with a surface condenser; if the consumption of steam is 25 lbs. per indicated horse power per hour, find the weight in pounds per hour of condensing water required when the temperature of the hot-well discharge is 104° F., and the initial and final temperatures of the condensing water are 50° F. and 80° F.

8. A test of the same engine gave the following results: Indicated horse-power 70; discharge from hot-well 30 lbs. per minute, temperature 113° F.; condensing water discharge 1050 lbs. per minute, initial and final temperatures 50° F. and 80° F. 3,200 thermal units per minute are absorbed in heating the Jackets; the steam pressure on the valves is 85 lbs. absolute.

Construct a balance sheet of heat, showing on one side the heat, in thermal units, supplied to the engine, and on the other the disposal of that heat, calculating the percentage in each case, and estimating the difference as loss by radiation.

[The total heat of one pound of steam at $\left\{\begin{matrix}85\\3\end{matrix}\right.$ lbs. pressure, absolute, from water at 32° F. is $\left\{\begin{matrix}1177\\1124\end{matrix}\right.$ thermal units.]

FIRST YEAR.

FREEHAND DRAWING.

MONDAY, MARCH 30TH:—2 TO 5 P.M.

Examiners, ... $\left\{\begin{matrix}\text{C. H. McLEOD, MA. E.}\\\text{A. T. TAYLOR, R.C.A., F.R.I.B.A.}\end{matrix}\right.$

1. Draw from the flat a copy of the ornament exhibited, reduced to about one quarter size.

2. Make a drawing of the group of objects before you, as seen from your point of view:—A skeleton cube, a ring, and an octagonal pyramid.

3. Make a drawing of the pattern for a pillow-block, as seen from your point of view.

FIRST AND SECOND YEARS.

FREEHAND MAP LETTERING.

SATURDAY, MARCH 28TH:—2 TO 5 P.M.

Examiner,..... .....C. H. MCLEOD, MA. E.

1. Print the words "Plan of the City of Montreal" arranged as a title and without a copy. "Plan" to be in Egyptian shaded and "City of Montreal" in Roman. Ink in. The letters may be open or filled.

2. Print the words "W. C. McDonald Technical," using the alphabe given as a copy.

SECOND YEAR.

DESCRIPTIVE GEOMETRY.

SATURDAY, MARCH 28TH:—MORNING 9 TO 12.

Examiner, ... C. H. MCLEOD, MA. E.

1. Construct a regular pentagon of 2 in. side, and from a point 0.5 in. from one of the angles draw a straight line dividing the pentagon into two parts of equal area.

2. Construct an ellipse whose axes are 2 in. and 3 in. in length. Find the tangent to the curve at any point not the end of an axis.

3. Find the plan and elevation of a prism, the end of which is an equilateral triangle of one inch side. An edge of the end is horizontal and makes an angle of 45° with the vertical. The lower face of the prism makes an angle of 30° with the horizontal. (*a*) Show the section of this prism when the cutting plane meets the axis at 45° and one face, in a line parallel to the end of that face.

4. A cylinder penetrates a cone. The altitude of the cone is 3 in. and the diameter of its base 3 in. The diameter of the cylinder is 1.5 in. Their axes are at right angles and meet at a point 2 in. from the apex of the cone. Draw a plan and elevation showing the lines of penetration. (*a*) Develop the surface of the cone.

5. Construct a scale for isometric projections.

6. The traces of a plane meet $x\,y$ at angles 45° and the traces of another plane are parallel to $x\,y$ at distances of one and two inches, in the vertical and horizontal, respectively. Find the angle between the planes. (*a*) Find the inclination of the line of section of the planes.

7. Draw the plan and elevation of an equilateral triangle of 1.5 in. side when the uppermost angle is 3 in. above the horizontal and two of the sides inclined at angles of 30° and 45° respectively with the horizontal. (*a*) Show the traces of the plane containing the triangle.

THIRD YEAR.

DESCRIPTIVE GEOMETRY.

SATURDAY, MARCH 28TH:—MORNING, 9 TO 12.

Examiner,..... ....C. H. MCLEOD, MA.E.

1. There is a regular hexagon ABCDEF of one inch side. The heights of the three points A, B, C, are respectively 1 in., 1.5 in., and 2 in. above the horizontal plane. Draw the plan and an elevation on a plane, making an angle of 30° with the horizontal projection of BC.

2. Given the projections of four points as shewn on the blackboard. Find the sphere which contains the points.

3. The axis of a cylinder of 2 in. diameter touches a sphere 2.5 in. diameter. Show plan and elevation of the line of section.

4. The traces of a plane meet $x\,y$ at 45°. Through a point in the plane one inch from each plane of projection, a line passes, making an angle of 45° with the horizontal and 30° with the vertical. Draw a plane containing the line and making an angle of 80° with the given plane.

5. The scales along two of the axes in an axometric projection are $\frac{5}{6}$ and $\frac{4}{5}$. Determine the scale along the other axis.

6. Find the shadow cast on the horizontal by the objects in question (3) by rays, the projections of which make angles of 30° with $x\,y$. The plane containing the axis of the cylinder and the centre of the sphere is to be vertical at 45° with $x\,y$.

7. Find the perspective of an hexagonal pyramid which stands on a plinth. The plinth is 5 ft. by 2 ft. thick and the side of the hexagon 1.5 ft. The altitude of the pyramid is 7 ft., the sides of the plinth make angles of 30° and 60°, and the object is 3 ft. on the right.

8. Project perspectively a cylindrial shaft of 10 ft. height and 4 ft. diameter, surmounted by an octagonal cap 5 ft. diameter and 2 ft. thick.

9. Find the perspective of the shadow cast by the objects in questions (7) or (8). Rays, as in question (6.)

10. Show how to project a *map* by Flamstead's method.

Civil Engineering Students will omit questions 2 or 4 and 7 or 8.
Mechanical Engineering Students will omit questions 10 and 7 or 8.
Mining Engineering Students will omit questions 6, 9 and 10.

SECOND YEAR.

SURVEYING.

TUESDAY, MARCH 31ST:—9 A. M.

Examiners,..... .... { C. H. McLEOD, MA. E. / W. J. SPROULE, MA. E.

1. Make *a traverse survey* with one of the transit instruments of the lines *A* to *B*, *B* to *C*, from the meridian *A* to *M*. Give the corresponding check readings of the compass. (*a*) Measure the collimation error of the transit instrument, and apply your result to correct the bearings you have obtained in the traverse survey.

2. The value of one division of the level of the Wye level is 21″. Measure the angle between the axis of the bubble and the line of sight of the telescope, which is in adjustment for collimation. Assume that the collars are equal of diameter.

3. Observe the bearing and angle of altitude of the cross, on the wall, from the position of the compass.

4. Find the area of the accompanying plat in square chains, using the method of "squares."

5. Make a rough sketch of the lower, eastern, portion of the College grounds, and explain how you would make a survey of it by "pacing." Show the field notes for one line.

6. Give two methods of constructing an optical square, and prove their accuracy. (*a*) How would you test the accuracy of the construction of such an instrument?

7.

Lines.	Bearings.	Distances.
A B	N. 35° E	6.49
B C	——	14.15
C D	S. 34° W	5.10
D E	N. 56° W	5.84
E F	S. 29½° W	——
F A	N. 48¼° W	8.73

Plot this "closed" survey making good the omissions, graphically.

8. The following notes have been taken from a section of a railway location. The road bed is 18 feet wide in cuttings and 16 feet in embankments. The surface of the ground slopes gently downwards to the left. Give such a set of notes as would be used in "setting-out" the work.

Station.	Elevations.	
	Gradient.	Surface.
25	90.00	101.45
26	89.00	98.22
27	88.00	80.30

9. Suppose the cross hairs are not in the axis of a level, and the "bubble-axis" has been brought paral'el to the line of sight by the "peg" method. In what condition of adjustment is the instrument?

10. What is the use of the gradienter attachment to the transit instrument? Sketch the method of attachment.

11. Suppose you had to make a contour survey of a small area, how would you proceed?

12. Give sketches within squares of about 2 in. side representing the conventional signs used in topography for the following:—Woods, Grass land, Sea coast.

13. Suppose an extensive underground survey, how would you connect it with the overground survey?

14. Calculate the radius of a 4° curve.

XV. A straight survey line A B runs near but not quite on a distant object C (not accessible). Give a method of finding a line on the ground running on C and parallel to A B, using transit and pickets only.

XVI. On level ground and with no resources but measuring chain, pin, and pickets, how would you run a line from a point A in a line B C, so that 500 feet from A it would not be more than one foot distant from a true perpendicular to B C meeting it at A?

THIRD YEAR.

SURVEYING.

FRIDAY, APRIL 3RD:—9 A.M.

Examiners, ... { C. H. McLEOD, MA. E. / W. J. SPROULE, MA. E.

1. Show that the spherical excess of a triangle is proportional to the area of the triangle.

2. The angles of a quadrilateral are given on the black-board, as measured. Apply the angle-equation adjustment, and show how to apply the side-equation adjustment.

3. The angles of a triangle were measured, each by five separate determinations, as in the table. Find the "probable error" of each mean value and adjust them, assigning the proper relative "weight" to each.

A	B	C
51° 10′ 8″	66° 30′ 40″	62° 19′ 10″
10 11	30 32	18 55
10 13	30 36	18 50
10 12	30 44	19 00
10 [illegible]	30 48	19 05
51° 10′ 10	66° 30′ 40″	62° 19′ 00″

4. If one of the angles B of a triangle cannot be "occupied" and an angle has been measured from a point N, near to it, between A and C, show how to compute the angle $A\ B\ C$ from the measured value of the angle $A\ N\ C$.

5. Show how to reduce sextant angles to the horizontal.

6. How would you "adjust" the solar attachment to the engineer's transit-theodolite? (a) Explain the use of the attachment in obtaining local time.

7. Explain a "precise" method of measuring a base line by the use of a steel tape. (a) What corrections must be applied to obtain the true length of the line?

8. Describe, generally, the survey of a tidal harbour, and describe in detail the methods you would employ in fixing the positions of soundings.

9. In the measurement of heights by the barometer, show that the differences of the logarithms of the barometer readings are proportional to the differences of the elevations of the stations, at which the readings have been made.

10. How would you determine the difference in the diameter of the rings of a "precise" level, of the Wye form?

11. Explain the use of the plane-table in contour surveying.

12. Four stars were observed with an astronomical transit at Montreal on March 30th, 1891. Determine the error of the clock. Clock rate zero, $b = -0.07^s$.

	Lamp West.				Lamp East.			
A	— 0.63		0.62		0.53		— 0.79	
B	2.06		0.80		0.88		2.23	
C	2.16		1.01		1.03		2.36	
	h. *m.* *s.*		*h.* *m.* *s.*		*h.* *m* *s.*		*h.* *m.* *s.*	
T	10 59 4.36		11 1 27.00		11 15 57.86		11 18 29.60	
a	10 57 2.52		10 59 24.56		11 13 54.31		11 16 25.28	

XIII. A B and B C are Railway tangents staked out on the ground. Their intersection angle is 45° 46′. It is required to begin a 5° curve (radius 1146.3 ft.) tangentially to B C and compound this with a 12° curve (radius 478.3 ft.) ending tangentially in A B at a point 233 feet from the intersection of A B and B C. How much of each curve is required?

B.A. Sc. EXAMINATION.

GEODESY AND PRACTICAL ASTRONOMY.

FRIDAY, APRIL 3RD.

Examiner, ... C. H. McLEOD, M.E.

1. The correction to the sidereal chronometer before you was $-2^{m}\cdot 13^{s}\cdot 5$ at 8^{h}, April 3rd, and the daily rate $-3^{s}\cdot 2$. What is the error of the mean-time chronometer for 75^{th} meridian time? The longitude is $4^{h}.\ 54^{m}.\ 18^{s}.54$.

2. Discuss the use of the transit instrument in the determination of clock corrections. Point out how best to secure the elimination of the instrumental errors, and show that

$$a = T + \Delta T + m + n \tan \delta + c \sec \delta$$

3. A great circle touches a parallel of latitude, find the length of an offset to the parallel, at a given distance along the great circle.

4. In computing the length and direction of a line joining the points on a sphere, show that

$$y'' = (l - l') - \tfrac{1}{2} \sin 1'' \ x''^{2} \tan l$$

where y'' is the portion of the meridian between the station of which l is the latitute and the foot of the perpendicular on this meridian from the other station of which l' is the latitude, and x'' is the perpendicular.

5. Show that the error of eccentricity of a graduated circle may be eliminated by the use of three microscopes or verniers.

6. Compare the relative merits of the direction and the repetition methods of measuring the angles of a triangulation.

7. The angles of a triangle were measured, each by five separate determinations as in the table. Find the "probable error" of each mean value, and adjust them, assigning the proper relative "weight" to each.

A.			B.			C.		
51°	10′	8″	66°	30′	40″	62°	19′	10″
	10	11		30	32		18	55
	10	13		30	36		18	50
	10	12		30	44		19	00
	10	6		30	48		19	05
51	10	10	66	30	40	62	19	00

8. In the measurement of heights by the barometer, show that the differences of the logarithms of the barometer readings are proportional to the differences of the elevations of the stations at which the readings have been made.

9. Describe the unifilar magnetometer and its use in the measurement of the horizontal component of the earth's magnetic force.

METEOROLOGY.

SATURDAY, MARCH 14TH :—9 A.M.

Examiner, ... C. H. MCLEOD, MA.E.

1. Find the equivalent of 75° Fahrenheit, on (*a*) the Centigrade scale, (*b*) Réaumur's scale.

2. State what you consider to be the essential conditions of a good thermometer exposure. (*a*) Explain the use of the *sling* thermometer.

3. Show by a sketch what you would consider to be the probable average curve of diurnal range of temperature for Montreal in July.

4. Under what conditions is terrestrial radiation most active ?

5. Describe the construction of a standard Mercurial barometer.

6. What correction does a barometer reading require (*a*) in order to ascertain the atmospheric pressure at the place of observation, (*b*) to make it comparable with observations taken at other places ? (*c*) How would you ascertain the amount of these corrections without the aid of "tables" ?

7. Give a classification of clouds, and state what you consider to be, roughly, the average height of each class above the earth's surface.

8. Describe the formation of (*a*) dew, (*b*) hoar-frost, (*c*) fog.

9. Describe the construction of an anemometer, and a method of getting an electric contact on the completion of each mile of wind.

10. Describe the construction of an instrument for recording the duration of bright sunshine.

FIRST YEAR.

CHEMISTRY.

TUESDAY, APRIL 14TH :—MORNING, 9 TO 12.

Examiner, ... B. J. HARRINGTON, B.A., PH.D.

1. What elements constitute the Nitrogen Family? Give their valence and atomic weights.

2. State and explain carefully the law of Dulong and Petit.

3. Explain by means of equations the reactions that take place in the manufacture of Sodium Carbonate by the Solvay process.

4. What volume of gases at 760 mm. and 0° would be evolved from 50 grams of gunpowder if the constituents and chemical changes were as indicated in the following equation :—

$$2\,KNO_3 + 3\,C + S = 3\,CO_2 + 2\,N + K_2S.$$

5. In the change of a ton of slaked Lime, in mortar, into Calcium Carbonate, how many pounds of Water are produced?

6. How has it been possible to predict the properties of undiscovered elements?

7. Give the names and formulæ of the principal compounds of Calcium.

8. What are the best solvents for Phosphorus, Sulphur, Iodine, Copper and Gold?

9. How would you distinguish salts of the following metals from one another :—(1) Nickel and Cobalt, (2) Tin and Lead, (3) Zinc and Aluminium, (4) Iron and Manganese?

10. From the following data calculate the specific gravity of a certain mineral :—

1. Weight of Sp. gr. bottle.....11.413 grams.
2. " " " filled with water.....33.937 "
3. " " " with mineral.....36.740 "
4. " " " with mineral and water.....55.079

SECOND YEAR. (*Chemistry and Mining Courses.*)

(Answer only ten questions.)

PRACTICAL CHEMISTRY.

WEDNESDAY, APRIL 15TH :—MORNING. 9 TO 12.

Examiner, ... B. J. HARRINGTON, B.A., PH.D.

1. In reducing 14 grams of Iron from the state of Ferric to that of Ferrous Chloride with H2S, how much Sulphur will be precipitated?

2. Explain the separation of Nickel and Cobalt by means of Potassium Cyanide and Sodium Hypochlorite.

3. How would you detect the presence of Lead and Iron in a sample of Brass?

4. Explain the necessity of modifying the method of analysis in the Third Group when Phosphoric or Oxalic Acid is present. How may the presence of these acids be detected?

5. On precipitation of the metals of Group III, with Ammonium Sulphide, the filtrate is often brown. What is the cause, and how may the difficulty be obviated?

6. How would you detect the presence (*a*) of Manganese and (*b*) of Magnesia in a specimen of Limestone?

7. How would you make an analysis of an insoluble glass?

8. How would you distinguish a Sulphite from a Thiosulphate, a Nitrite from a Nitrate, a Ferrocyanide from a Ferricyanide?

9. A tube containing Cupric Oxide weighed 14.061 grams. After heating it to redness, and passing Hydrogen through until all the Cupric Oxide was reduced to metal, the tube and Copper weighed 10.091 grams. Calculate (*a*) the quantity of Cupric Oxide originally present in the tube, (*b*) the number of liters of Hydrogen which have united with the Oxygen of the Cupric Oxide, and (*c*) the volume of Water produced.

10. What reactions take place (*a*) when Ammonium Sulphide is added to a solution of Aluminium Chloride, (*b*) when Caustic Potash is added to solution of Lead Nitrate?

11. How would you distinguish Benzoic from Succinic Acid, and Acetic from Formic?

12. What are the chief reactions employed in the identification of Phenol?

SECOND AND THIRD YEARS (*Chemistry Course*).

ORGANIC CHEMISTRY.

FRIDAY, APRIL 3RD:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. Explain the supposed difference in the constitution of Butane and Iso-Butane.

2. How may Nitrogen be detected in organic bodies? How estimated quantitatively?

3. What are Glycols? What two series of acids result from their oxidation?

4. Propenyl Alcohol. Give its composition, and briefly describe its preparation and properties.

5. How much Cane Sugar is contained in one gallon of a saccharine

liquid, which gives with the Laurent polariscope in a 2-decimeter tube an angular rotation of 21° 40′?

6. What are triatomic Phenols? Name and briefly describe one of them.

7. Alizarin and Anthraquinone. Their constitution and relation to Anthracene.

8. Explain by means of formulæ the relationship of the following Benzene derivatives:—Anilin, Benzaldehyde, Benzoic Acid, Salicylic Acid, Picric Acid.

9. What is the formula of a Hydrocarbon which contains twice as many atoms of Hydrogen as of Carbon, and the vapour of which has a specific gravity of 1.94?

10. Fehling's solution and Schweitzer's reagent. Give their preparation and uses.

THIRD YEAR (*Chemistry and Mining Courses*).

PRACTICAL CHEMISTRY.

WEDNESDAY, APRIL 15TH:—MORNING, 9 TO 12.

Examiner,..... B. J. HARRINGTON, B.A., PH.D.

1. One gram of a marble was dissolved in 25 c.c. of normal Hydrochloric Acid, and 6 c.c. of normal alkali were required to neutralize the remaining free acid. What was the percentage of lime in the marble?

2. How would you estimate the Nickel in a sample of niccoliferous Pyrrhotite?

3. In the analysis of a sample of Apatite .25 gram was taken, and the precipitate of Ammonium Magnesium Phosphate after ignition weighed 0.1433 gram. What was the percentage of Tricalcium Phosphate in the sample?

4. How would you determine the quantity of Zinc in a sample of Brass?

5. One gram of a limestone containing 96 per cent. of Calcium Carbonate is dissolved in Hydrochloric Acid. After rendering Alkaline with Ammonia, what weight of Ammonium Oxalate will be necessary to precipitate the Calcium as Oxalate?

6. What are the chief precautions to be taken in the separation of Potassium and Sodium?

7. What volume of Carbon Dioxide is given off on mixing 5 grams of Manganese Dioxide with Water, Sulphuric Acid and Sodium Oxalate?

8. How would you determine the quantity of Sulphur in a specimen of Iron Pyrites?

9. Calculate the percentage composition of Blue Vitriol.

10. How much Sulphuric Acid was present in a solution that required 0.8 grm. of crystallised Barium Chloride for complete precipitation?

11. What quantity of Ferric Oxide corresponds to 5 grams of Ferrous Ammonium Sulphate?

B.A.Sc. EXAMINATION. (*Mining Course.*)

ASSAYING.

FRIDAY, APRIL 3RD:—MORNING, 9 TO 12.

Examiner,..... ....B. J. HARRINGTON, B.A., PH.D.

1. Explain the operations of parting and inquartation.

2. What charges would you employ in the scorification assay for Silver (1) of samples of Grey Copper Ore, (2) of Iron Pyrites, (3) of Stibnite?

3. How would you estimate the quantity of Manganese in an Iron Ore?

4. A sample consists of Galena Copper Pyrites and Zinc Blende in a Quartz gangue. How would you determine the proportions of Copper, Zinc and Iron?

5. How may the value of a sample of Apatite be determined?

6. Describe the electrolytic estimation of Nickel in a matter containing also Copper and Iron.

7. How would you make an analysis of a sample of Gypsum?

8. How would you estimate the sulphur (*a*) in a sample of Iron Pyrites, (*b*) in a Coal?

9. A sample of tailings has a specific gravity of 3, and is composed of Quartz (sp. gr. 2.6) and Iron Pyrites (sp. gr. 5.1). What percentage of Pyrites does the mixture contain?

10. State carefully how you would ascertain the value of the ores represented by the specimens before you.

MINING.

THIRD YEAR (*Mining Course*).

THURSDAY, APRIL :—MORNING, 9 to 12.

Examiner..... .... B. J. HARRINGTON, B.A., PH.D.

1. State what you know with regard to the construction and use of sluices.

2. What is a miner's inch?

3. What are the chief essentials of an explosive for blasting purposes Explain the use of electricity in blasting.

4. Discuss the relative merits of furnace and machine ventilation.

5. At a certain colliery, where the downcast and upcast shafts are each 800 feet deep, 180,141 cubic feet of air per minute were circulating, the average temperature of the air in the downcast shaft being 41°F., and in the upcast 200°F. Taking the barometric pressure 400 feet from the surface at 30 inches of mercury, calculate the number of horse-power producing ventilation.

6. Draw a plan illustrating the working of a colliery by the long-wall method.

7. State what you know with regard to rails for underground roadways, and the methods of laying them.

8. How are galleries secured?

9. What principles would guide you in seeking for the continuation of a faulted coal-seam?

10. Explain each of the following terms :—Stope, winz, skip, panel, goaf, creep, stopping, air-crossing.

FACULTY OF LAW.

FACULTY OF LAW.

FIRST YEAR.

ROMAN LAW.

THURSDAY, 18TH DECEMBER:—3.30 TO 6.30 P.M.

Examiner,.....PROFESSOR N. W. TRENHOLME, D.C.L., Q.C.

1. Indicate the principal sources of our knowledge of the history of Roman Law, and particularly of the primitive Roman constitution and laws.

2. Give some account of three important pieces of legislation in the long struggle which ended in the equalization of the orders?

3. Describe the different epochs, mentioned by Sir Henry Maine, in the growth and development of law, and point out in this connection the value and importance of early codes and the agencies in the amelioration of the law when it has once been codified.

4. Give an account of the *Corpus Juris Civilis* and of the works comprised in it, and state what you know of five of the great jurists named in it.

5. What were :—leges ; plebiscita ; senatus-consulta ; principum placita ; jus honorarium ; responsa prudentum ; comitia curiata ; comitia centuriata ; comitia tributa ; justae nuptiae : dos ?

6. Of what does the first Book of the Institutes treat, and describe the different legal institutions treated of, distinguishing the artificial from the natural and permanent ?

7. What is the legal principle involved in the creation of the *tutela* and *curatio*, and point out how the Romans practically worked out the principle in their system, giving the principal provisions devised by them for the protection of the rights and interests of the minor ?

8. Auctoritas autem tutoris in quibusdam causis necessaria pupillis est in quibusdam non est necessaria.

Explain what the auctoritas of the tutor was, and in what cases as a rule it was necessary and in what cases not.

9. Translate the following Extracts, and give explanations asked for under each :—

Omnes populi qui legibus et moribus reguntur, partim suo proprio, partim communi omnium hominum jure utuntur. Nam quod quisque populus

ipse sibi jus constituit, id ipsius civitatis proprium est, vocaturque jus civile, quasi jus proprium ipsius civitatis; quod vero naturalis ratio inter omnes homines constituit, id apud omnes populos peraeque custoditur, vocaturque jus gentium, quasi quo jure omnes gentes utuntur. Et populus itaque Romanus partim suo proprio, partim communi omnium hominum jure utitur. In 1, 2, 1.

What influence had the *jus gentium* on the *jus civile* of the Romans, and state by means of what agency and under the impulse of what philosophic theory, according to Sir Henry Maine, its principles became incorporated into the law?

10. Jus autem potestatis quod in liberos habemus, proprium est civium Romanorum; nullienim alii sunt homines, qui talem in liberos habeant potestatem, qualem nos habemus. In 1, 9, 2.

Point out in what important respects the above statement is true compared with parental authority in our law, and state some of the modifications the *Patriæ Potestas* underwent in later Roman Law both as regards the person and the property of those *in potestas*.

11. Adoptio autem duobus modis fit, aut populi auctoritate, aut imperio magistratus, velut prætoris. Populi auctoritate adoptamus eos qui sui juris sunt: quæ species adoptionis dicitur adrogatio, quia et is qui adoptat, rogatur, id est, interrogatur an velit eum quem adoptaturus sit justum sibi filium esse; et is qui adoptatur, rogatur an id fieri patiatur, et populus rogatur an id fieri jubeat. Imperio magistratus adoptamus eos qui in potestate parentium sunt, sive primum gradum liberorum obtineant, qualis est filius et filia, sive inferiorem, qualis est nepos, neptis, pronepos,, proneptis.

Et quidem illa adoptio quæ per populum fit, nusquam nisi Romæ fit at haec etiam in provinctis apûd præsides earum fieri solet. 1, G. 98-100.

Explain the term: populi auctoritate; imperio magistratus; præsides; what more special designations were included in the latter term?

What was the effect of *adoptio*, and why was it regarded of more importance in ancient law than it is in modern?

12. Olim itaque tribus modis in manum conveniebant; usu, farreo, coemptione. 1 G. 110.

Explain fully the meaning of these words, and the requirements in each case, usu, farreo, coemptione: what is the force of *olim* here?

13. Ideo autem aes et libra adhibetur, quia olim æreis tantum nummis utebantur, et erant asses, dupondii, semisses et quadrantes, nec ullus aureus vel argenteus nummus in usu erat, sicut ex lege XII tabularum intelligere possums: eorumque nummorum vis et potestas non in numero erat, sed in pondero nummorum; veluti asses liberales erant; et dipondii

tum erant bilibres, unde etiam dipondius dictus est, quasi duo pondo: quod nomen adhuc in usu retinetur; semisses quoque et quadrantes pro rata scilicet portione libræ æris habebant certum pondus. Item qui dabat olim pecuniam non adnumerabat eam, sed appendebat; unde servi quibus permittitur administratio pecuniæ dispensatores appellati sunt, et adhuc appellantur.

What legal institution does the above refer to; describe it?

SECOND AND THIRD YEARS.

ROMAN LAW.

THURSDAY, 18TH DECEMBER:—3.30 TO 5.30 P.M.

Examiner,.....PROFESSOR N. W. TRENHOLME, D.C.L., Q.C.

1. What were the different kinds of tutorship and of curatorship in the Roman Law, and how did it differ in this respect from our Law?

2. Tutores pupillorum negotia gerunt et auctoritatem interponunt. Tutor personae datur. Explain fully the meaning and import of the above, having reference to the different periods of minority.

3. What was the principal historic division of *res* in Roman Law, and state on what is was founded, and the importance of such divisions in primitive law?

4. Mention the principal civil modes of acquisition, also the principal natural modes, and give an outline of Sir Henry Maine's criticism on the doctrine of acquisition by *occupatio*.

5. What was the *dominium ex jure Quiritium*, and what the *dominium bonitarium*, and give some account of this two-fold division and its subsequent disappearance in Roman Law?

6. Point out the difference between primitive and modern society as regards the units composing society, and show the influence of this on primitive forms of contract, will, and other transactions of life.

7. Define the different personal servitudes in Roman Law, and the rights of the holder of the principal one as regards the different kinds of fruits.

8. Point out clearly when a charge on real property is a real servitude and when it is a mere personal right.

9. What were the principal kinds of *Edicta* enjoyed by the possessor in Roman Law, and state what benefits accrued therefrom in case (1) of the *bona fide* possessor and (2) of the possessor *mala fide*?

10. What was the law of evidence in this Province at the time of the cession, and give the principal subsequent changes made therein?

11. Translate the following Extracts, and give explanations asked for under each :—

Omnes populi qui legibus et moribus reguntur, partim suo proprio, partim communi omnium hominum jure utuntur. Nam quod quisque populus ipse sibi jus constituit, id ipsius civitatis proprium est, vocaturque jus civile, quasi jus proprium ipsius civitatis; quod vero naturalis ratio inter omnes homines constituit, id apud omnes populos peraeque custoditur, vocaturque jus gentium, quasi quo jure omnes gentes utuntur. Et populus itaque Romanus partim suo proprio, partim communi omnium hominum jure utitur. In 1, 2, 1.

What influence had the *jus gentium* on the *jus civile* of the Romans, and state by means of what agency and under the impulse of what philosophic theory, according to Sir Henry Maine, its principles became incorporated into the law?

12. Jus autem potestatis quod in liberos habemus, proprium est civium Romanorum; nullenim alii sunt homines, qui talem in liberos habeant protestatem, qualem nos habemus. In 1, 9, 2.

Point out in what important respects the above statement is true compared with parental authority in our law, and state some of the modifications the *Patriæ Potestas* underwent in later Roman Law, both as regards the person and the property of those *in potestas*.

13. Adoptio autem duobus modis fit, aut populi auctoritate, aut imperio magistratus, velut prætoris. Populi auctoritate adoptamus eos qui sui juris sunt: quæ species adoptionis dicitur adrogatio, quia et is qui adoptat, rogatur, id est, interrogatur an velit eum quem adoptaturus sit justum sibi filium esse; et is qui adoptatur, rogatur an id fieri patiatur, et populus rogatur an id fieri jubeat. Imperio magistratus adoptamus eos qui in potestate parentium sunt, sive primum gradum liberorum obtineant, qualis est filius et filia, sive inferiorem, qualis est nepos, neptis, pronepos, proneptis.

Et quidem illa adaptio quæ per populum fit, nusquam nisi Romæ fit, at haec etiam in provinctis apud præsides earum fieri solet. 1, G. 98-100.

Explain the term: populi auctoritate; imperio magistratus; præsides; what more special designations were included in the latter term?

What was the effect of *adoptio*, and why was it regarded of more importance in ancient law than it is in modern?

14. Olim itaque tribus modis in manum conveniebant: usu, farreo, coemptione. 1 G. 110.

Explain fully the meaning of these words, and the requirements in each case, usu, farreo, coemptione: what is the force of *olim* here?

15. Ideo autem aes et libra adhibetur, quia olim æreis tantum nummis utebantur, et erant asses, dupondii, semisses et quadrantes, nec ullus aureus vel argenteus nummus in usu erat, sicut ex lege XII tabularum intelligere possums: eorumque nummorum vis et potestas non in numero erat, sed in pondere nummorum; veluti asses liberales erant; et dipondii tum erant bilibres, unde etiam dipondius dictus est, quasi duo pondo: quod nomen adhuc in usu retinetur; semisses quoque et quadrantes pro rata scilicet portione libræ æris habebant certum pondus. Item qui dabat olim pecuniam non adnumerabat eam, sed appendebat; unde servi quibus permittitur administratio pecuniæ dispensatores appellati sunt, et adhuc appellantur

What legal institution does the above refer to: describe it?

CRIMINAL LAW.

THURSDAY, 9TH APRIL:—4 TO 6.30 P.M.

Examiner,.....N. W. TRENHOLME, D.C.L.

1. Define Criminal Law, and state some of the reasons which give interest as well as importance to its study.

2. Give a short account of the means by which criminal justice was administered in this Province before the Conquest, and state in what important features the Criminal Law then administered was defective and inferior to the English Criminal Law.

3. In what sense is English Criminal Law our Criminal Law at the present time? Was it ours at any time, and if so, when and how did it become so, and what is the cause of any difference that has taken place in this respect since the Cession?

4. Indicate some of the principal ameliorations which the Criminal Law has undergone both in England and this country since the Cession, and the manner in which they have been effected.

5. Give some account of the origin and jurisdiction of the principal criminal courts which have had to do with the administration of Criminal Law in England and in this Province.

6. Give an account of the means for the apprehension and committal of offenders at different periods in the history of Criminal Law, and state when and by what authority the granting of warrants of arrest and the taking of preliminary depositions came about.

7. What were the different principal modes of accusation known to the Criminal Law, and indicate their relative prominence at different periods and the reasons therefor?

8. What were the different forms of trial, other than that by jury, known to the Criminal Law, and when and why did they fall into disuse? When was trial by battel formally abolished and under what circumstances?

9. Upon what evidence or knowledge of the facts did juries act at different periods, and what was the cause of the change in the law that took place in this respect? What was the origin of the practice of fining and imprisoning juries for their verdicts, and when was this practice formally declared to be illegal?

10. What are some of the principal provisions introduced by statutes to secure greater certainty and efficiency in the administration of criminal justice:—1. As regards the statements and descriptions to be contained in the indictment; 2. as regards the time when certain objections must be taken to the indictment; 3. as regards cases where the evidence falls short of establishing the offence charged in the indictment, or establishes a different offence; 4. as regards the indicting and trying of accessories?

11. What is the Statute of Treasons, and what principal offences did it cover by its literal terms, and what offences was it held to cover by the interpretation put on it? What is our law on the subject at the present time?

12. What are the different kinds of homicide, and point out the difference between murder and manslaughter? From about what time have the words "of his malice aforethought" come to bear their present meaning, and what led to this meaning being placed on them?

LAW OF REAL ESTATE.

FRIDAY, DECEMBER 12TH:—4 TO 6 P.M.

Professor, ...HON. J. S. C. WURTELE, D.C.L.

1. Under what tenures are lands now held in the Province of Quebec, and what are their features?

2. Define full ownership of land.

3. Define the difference between a real right in and a personal right to land.

4. Give the real rights that may be possessed on land, and define each of them.

5. Describe the nature of the two principal actions relating to real estate, viz.: petitory actions and possessory actions.

6. What measures are used in the measurement of land in the Province of Quebec?

7. Describe the difference between the servitude of a right of way over a lane or passage, and a right of undivided and common ownership of a lane or passage.

8. What in a city or town is the obligation of neighbors with respect to enclosure?

9. What is this obligation in the country?

10. What are the respective rights of the possessor and the owner with respect to improvements made by the former?

11. To whom do the fruits belong when land is possessed by one who is not the owner?

12. When can the action of boundary be exercised?

BILLS—NOTES—CHEQUES.

March 13th.

Professor,.....L. H. Davidson, D.C.L., Q.C.

1. Give definition of a Bill, Note and Cheque, respectively, and state what are the essentials of each. Explain in what respect these several instruments resemble one another as to the liability of the parties thereto.

2. Explain the meaning of the terms "Delivery," "Acceptance," "Endorsement," "Bearer," "Holder," "Holder in due course," as applied to Bills or Notes.

3. What is a "Negotiable instrument?" What Bills or Notes are negotiable, and how is "negotiation" thereof effected?

4. What consequences follow by law: (1) Upon the drawing of a Bill, as to the Drawer; (2) upon the acceptance of a Bill, as to the Drawee; (3) upon the endorsement of a Bill, as to the Indorsee.

5. How is a bill or note "dishonored?" What steps are necessary upon the due dishonor of a Bill or Note in order to retain right against the parties to the instrument? Explain succinctly but fully.

6. What is meant by a "Crossed Cheque?" How many kinds of "crossing" are recognized by the Act; distinguish each, and state how a "crossed" cheque differs from one not crossed.

7. Who is a "transferrer by delivery" of a Bill or Note? and what are the liabilities of such transferrer and what right or title does the transferee take as against other parties to the instrument?

8. How may a Bill or Note be "discharged?"

9. What is an "Acceptance for Honor," and how and when may it be made? What is the engagement of the acceptor for Honor and towards whom? What steps are necessary to hold the acceptor for Honor to due payment of the Bill?

10. What is a "Payment for Honor," and how is it to be made? Upon what instruments may it be made? Is there any difference, and if so, what in the quality of the title obtained by the "payee for honor" and that of the transferee of an overdue bill?

LAW OF CONTRACTS.

SATURDAY, 11TH APRIL:—3 TO 5 P.M.

Examiner, ... C. A. GEOFFRION, Q.C.

1. What is the difference between *obligations* and *contracts?* Can a party incapable of contracting oblige himself and become liable to any actions resulting from obligations?

2. Who are the persons incapable of contracting? Explain the nature of each incapacity, *i.e.*, which is absolute, which is relative?

3. What kind of error, fraud or violence are causes of nullity of contracts? Do they carry absolute nullity?

4. By the rules contained in our Civil Code, when and by whom can the *actio pauliana* be exercised? Show the difference in this respect between gratuitous and onerous contracts?

5. Give the definition of *negotiorum gestio*, and a few explanations as to the rights and obligations resulting from this quasi-contract.

6. When does *condictio indebiti* take place? Are the obligations of the person who received a thing not due in good faith the same as when the person is in bad faith; if not, in what do they differ?

7. Can a person, who knowingly paid a thing not due, recover by *condictio indebiti*, *v.g.*, a person who paid another for immoral or illegal purposes?

FIRST YEAR.

HISTORY OF LOWER CANADIAN LAW AND LEGAL BIBLIOGRAPHY.

SATURDAY, DECEMBER 13TH:—3 TO 5 P.M.

Examiner,.....PROF. ARCH. MCGOUN, M.A, B.C.L.

1. During what period did the Company of One Hundred Associates possess this country under a proprietary Government?

2. What was the original composition of the Sovereign Council of New France? When and how was it modified, as to composition and name?

3. Give an account of the powers of the Intendant.

4. What is customary law? What was the part of France to which it was applied called, as distinguished from the rest of France?

5. Mention a few early collections in which provisions of customary law are recorded.

6. What were the various tenures of land under the feudal system?

7. What were the four great ordinances of the XVII. century, under Louis XIV?

8. Give a short account of Dumoulin and of Pothier and of their works.

9. Mention any three titles of the Custom of Paris that have been, in the main, retained in our law. Give the name of any good commentator on this Custom.

SECOND AND THIRD YEARS.

HISTORY OF LOWER CANADIAN LAW AND LEGAL BIBLIOGRAPHY.

Examiner,.....PROF. ARCH. MCGOUN, M.A., B.C.L.

1. State briefly the grounds on which different European nations claimed the earliest sovereignty of Canada.

2. Give an account of the Sovereign Council of New France, its composition at various dates and its functions.

3 What departments of public affairs were under the Governor and the Intendant respectively?

4. Give an account of customary law in France, and state when its legal authority was expressly recognized by royal edict.

5. In virtue of what ordinance was the reduction to writing of the various customs of France undertaken; what was the first custom published; and when were the customs of Paris and of Orleans?

6. Mention a few ordinances of general importance before A.D. 1600.

7. What ordinances were passed in the XVIII. century, and under what chancellor?

8. Give a short account of Cujas, Dumoulin and Domat, and of their works.

9. What two great men contributed chiefly to the unification of civil law in France, and what was the character of the work of each?

10. How have the Custom of Paris and the Ordinance of 1867 respectively influenced our law? Name one commentator on each.

CIVIL PROCEDURE.

FRIDAY, APRIL :—AFTERNOON, 4 TO 6.

Examiner..... ....PROFESSOR FORTIN.

1. What is an action? How are actions divided? What conditions are required to entitle a person to bring an action?

2. What is jurisdiction? How many kinds of jurisdiction are there? How is the want of jurisdiction pleaded?

3. Before what tribunal are personal actions brought? Real actions? Mixed actions? Actions relating to matters of successions?

4. What is the effect of a judicial demand regularly formed?

5. How many kinds of pleas are there? Within what delays must they be fyled?

6. When can a demurrer be made? What is the difference between a plea *au fond* and an *exception péremptoire?*

7. What is *lis pendeus?* What is required in order that there many be *lis pendeus?*

8. How is issue joined?

9. What is an intervention? Who can form the same and how is it formed?

10. What is an incidental demand? When and by whom can it be formed? How is it formed?

NOTARIAL LAW AND PROCEDURE.

Examiner.....PROF. W. DE M MARLER, B.A., B.C.L.

1. Name the various classes of writings under the Roman Empire, and give the distinctions as regards proof?

2. How were notaries appointed in France? In what respects did their functions differ?

3. Define authentic writings. State the conditions required for authenticity. Wherein do authentic writings differ from private writings?

4. State in what cases an authentic deed can be set aside on improbation; give examples in which such action would be unnecessary.

5. How would a vendor make delivery of a Lot of Land sold by measure?

6. How would you describe a Lot forming part of an official number? How, if bounded in front by a street and on the other three sides by other parts of the same number belonging to the same owner?

7. A sells to B a lot of 100 x 100 at a price per foot which B has paid; on measurement the lot contains 96 x 100. What are B's rights against A?

8. Give examples of clauses extending and diminishing the effects of legal warranty?

9. In what cases would the vendor not be liable to restore the price if the purchaser were evicted?

10. Distinguish between the effects of legal warranty and the clause of *franc et quitte?*

CIVIL LAW.

FRIDAY, 17TH APRIL:—4 TO 6 P.M.

Examiner.....C. J. DOHERTY, B.C.L.

1. By what methods can a person dispose of his property gratuitously? Define these different methods, and point out the distinctions between them?

2. What is the effect of an impossible condition or condition contrary to good morals, to law, or to public order, upon which a gift *inter vivos* depends? What is the effect of a similar condition in a will?

3. At what time must the capacity to give and to receive *inter vivos* exist? At what time must the capacity of a testator to dispose by will exist? At what time must the capacity to receive by will exist?

4. What gifts *inter vivos* are exempt from registration?

Where registration is required, what are the effects of its absence? By whom may the want of registration be set up?

5. In what contracts, by what persons and in favor of what persons can future property be validly given?

6. What are the different forms of Wills? Mention the essential formalities required in each form?

7. What is the liability for the debts of the testator of: 1. the universal legatee; 2. the legatee by general title; 3. the legatee by particular title?

8. By what means can a testator revoke a will or legacy? Upon what grounds may the revocation of a will or legacy be demanded?

9. In what acts can substitutions be created? In what cases can substitutions be revoked by the person creating them?

10. In what quality does the institute hold the substituted property prior to the opening of the substitution? What are his principal obligations?

RAILWAY LAW.

THURSDAY, 17TH APRIL;—AFTERNOON, 3 TO 5.

Examiner,..... ..... PROFESSOR HARRY ABBOTT, Q.C.B.C.L.

1. To what Railway Companies do the provisions of "The Railway Act" Dominion) apply? Distinguish between Companies which are wholly or partially subject to the provisions of that Act.

2. Who may be directors of a Railway Company, and what is the qualification of a director? (*a*) Under the Dominion Act, (*b*) under the Quebec Act?

3. State briefly the general powers of Railway Companies by statute.

4. What are the rights and privileges of bond holders, in the event of default in payment of interest or capital of bonds issued by a Railway Company, and how may they be exercised?

5. State briefly the procedure to be followed in expropriating the lands of individuals for Railway purposes.

6. What persons are entitled to statutory compensation by reason of the exercise of the powers of a Railway Company? and state the principles which should govern arbitrators in assessing the compensation, and especially as to the nature and extent of the damages to be awarded.

7. A and B are owners of houses equi-distant from a Railway, part of the land on which A's house is built is taken by the Railway, B's property is not touched. Would either of them be entitled to statutory compensation for depreciation in value of their houses resulting from the noise, smoke and vibration caused by passing trains? Give reasons for your opinion supported by authorities

8. What are the remedies against an award, (*a*) under the Dominion Act, (*b*) under the Quebec Act? And point out on what grounds, (generally) and how, they may be exercised; and illustrate by a reference to the jurisprudence.

9. Give instances of what would, and what would not, constitute a case of undue preference by a Railway Company, in the rate of tolls, in favor of any person or any description of traffic.

10. In what cases are Railway Companies liable, and in what cases are they not liable, for animals killed or injured by their trains?

11. Explain the liability of Railway Companies as common carriers of (*a*) goods, (*b*) passengers, (*c*) passengers' baggage.

12. In what manner and to what extent may Railway Companies limit their liability as carriers of goods? Give an illustration from some reported case.

FIRST YEAR.

CIVIL LAW.

Law of Persons.

Friday, December 19th :—Afternoon, 4 to 6.

Examiner,..... .....Professor Eugène Lafleur, L.A., B.C.L.

1. Mention the various ways in which the quality of a British subject is acquired and lost.

2. Enumerate the principal civil disabilities of aliens in the Province of Quebec.

3. A marriage is contracted by an escaped convict, under sentence of imprisonment for life, with a woman who is in good faith and in ignorance of his status.

(*a*) Are the children born of such a marriage legitimate?

(*b*) Would such children inherit from both or either of their parents?

4. Define domicil, distinguishing it from residence. Illustrate by examples.

5. (*a*) How is a charge of domicil effected in the case of independent persons.

(*b*) An emigrant, who has abandoned his home in England, sails for the Province of Quebec, where he intends to establish himself permanently, but dies on the voyage.

What law governs the devolution of his *ab intestate* succession?

6. D, the son of a subject of the United States, is born in the Province of Ontario, where his father is then residing, though domiciled, without being naturalized, in the Province of Quebec.

Where is D's domicil of origin?

Give reasons for your answer.

7. Distinguish between the provisional and the absolute possession of the heirs of absentees.

8. (*a*) How can the husband, under our law, enforce the obligation imposed on the wife of residing with him?

(*b*) Under what circumstances would a wife be absolved from this obligation?

9. For what causes can separation from bed and board be demanded:—

(*a*) By the husband;

(*b*) By the wife?

10. (*a*) In how many ways can a minor become emancipated?

(*b*) What are the effects of emancipation on the status and capacity of a minor?

SECOND AND THIRD YEARS.

CIVIL LAW.

Law of Persons.

Friday, December 19th:—Afternoon, 4 to 6.

Examiner,.....Professor Eugène Lafleur, B.A., B.C.L.

1. (*a*) To what extent has the English doctrine of perpetual allegiance been modified, in its application to cases arising in Canada, by the provisions of the Naturalization Act (Rev. Stat. Can., ch. 113)?

(*b*) State the conditions upon which an alien may obtain a certificate of naturalization under the terms of that statute?

2. Enumerate the principal effects of civil death.

3. What is the domicil of origin of:—

(*a*) A legitimate infant born during its father's lifetime;

(*b*) An illegitimate infant;

(*c*) A posthumous infant;

(*d*) A foundling;

(*e*) A person legitimated *per subsequens matrimonium*?

4. A domiciled Scotchwoman is married in France, without ante-nuptial contract or marriage settlement, to a domiciled Englishman residing in London. The consorts retain their residence in London for five years after the marriage, and then come to Montreal, with the intention of making it their permanent home.

(*a*) Would community of property under our Civil Code exist between the consorts as regards any moveable or immoveable property acquired by them in this Province after their removal to Montreal?

(*b*) If not, what law would govern their rights to such property?

(*c*) Would real estate in the Province of Quebec acquired by the husband be subject to customary dower?

5. What is the effect of the re-appearance of an absentee, or of proof of his existence:—

(*a*) During the provisional possession of the heirs; and

(*b*) After the heirs have obtained absolute possession?

6. (*a*) What persons are allowed to seek the nullity of a marriage contracted before the parties, or either of them, have attained the age required by law?

(*b*) What limitations or restrictions does our law establish with respect to the right to contest such marriages?

7. Mention the principal effects of a judgment of separation from bed and board.

8. (*a*) Can the testimony of the parties be received in actions for separation from bed and board?

(*b*) Would admissions in the pleadings avail against the party making them?

(*c*) Could acquiescence in a judgment granting separation from bed and board be invoked to obtain the dismissal of an appeal?

9. What are the grounds of incapacity, exclusion and removal from tutorship?

10. (*a*) State the principal provisions of the Act defining the investments to be made by administrators. (Q. 42-43 Vict., cap. 30, amended by Q. 46 Vict., cap. 24.)

(*b*) What liability does this statute impose on a Tutor or Curator who fails to comply with its provisions?

FACULTY OF MEDICINE.

(For Papers see "Announcement" of Faculty of Medicine)

UNIVERSITY SCHOOL EXAMINATIONS, 1891.

UNIVERSITY SCHOOL EXAMINATIONS, 1891.

PRELIMINARY SUBJECTS.

READING.

In proportion as the years both lessen and shorten, I set more count upon their periods, and would fain lay my ineffectual finger upon the spoke of the great wheel. I am not content to pass away "like a weaver's shuttle." Those metaphors solace me not, nor sweeten the unpalatable draught of mortality. I care not to be carried with the tide that smoothly bears human life to eternity; and reluct at the inevitable course of destiny. I am in love with this green earth,—the face of town and country,—the unspeakable rural solitudes, and the sweet security of streets. I would set up my tabernacle here. I am content to stand still at the age to which I am arrived,—I and my friends,—to be no younger, no richer, no handsomer. I do not want to be weaned by age; or drop like mellow fruit, as they say, into the grave. Any alteration, on this earth of mine, in diet or in lodging, puzzles and discomposes me. My household gods plant a terrible fixed foot, and are not rooted up without blood. They do not willingly seek Lavinian shores. A new state of being staggers me. Sun, and sky, and breezes and solitary walks, and Summer holidays, and the greenness of fields, and the delicious juices of meats and fishes, and society, and the cheerful glass, and candlelight, and fireside conversations and innocent varieties, and jests, and *irony itself*,—do these things go out with life?

CHARLES LAMB.

WRITING.

MONDAY, JUNE 1ST:—MORNING, 10.45 TO 11.

1. Write (*a*) your name in full;
   (*b*) your post office address;
   (*c*) your age on the 1st of June, 1891;
   (*d*) the name of your school.

2. Write out the following:—
   Yet, once again, farewell thou minstrel harp!
   Yet, once again, forgive my feeble sway,
   And little reck I of the censure sharp,
   May idly cavil at an idle lay.

3. Write ten words beginning with different capital Letters as a specimen of your penmanship.

DICTATION.

MONDAY, JUNE 1ST:—MORNING, 10 TO 10.45.

Examiners, { W. CHALK, B.A. / REV. J. HEPBURN, M.A. / REV. E. A. W. KING, M.A. / CHAS. E. MOYSE, B.A. / REV. R. HEWTON, M.A.

It was resolved that on the Wednesday morning the question of the Irish forfeitures should again be taken into consideration, and that every member who was in town should then be in his place on peril of the highest displeasure of the House. It was moved and carried that every Privy Councillor who had been concerned in procuring or passing any exorbitant grant for his own benefit had been guilty of a high crime and misdemeanour. Lest the courtiers should flatter themselves that this was meant to be a mere abstract proposition, it was ordered that a list of the members of the Privy Council should be laid on the table. As it was thought not improbable that the crisis might end in an appeal to the constituent bodies, nothing was omitted which could excite out of doors a feeling in favour of the bill. The Speaker was directed to print and publish the report signed by the four Commissioners, not accompanied, as in common justice it ought to have been, by the protest of the three dissentients, but accompanied by several extracts from the journals which were thought likely to produce an impression favourable to the House and unfavourable to the Court. All these resolutions passed without any division, and without, as far as appears, any debate. There was, indeed, much speaking, but all on one side.—MACAULAY.

N.B.—The examiner will read the extract three times, the candidates writing it out during the second reading. The first and third readings are respectively intended to give the candidates a general idea of the nature of the passage, and to guide them in punctuating. As it is of great importance that candidates should not be left in a state of uncertainty, the examiner may, if he thinks it necessary, repeat, on request, any word or phrase. The examiner will mention the conclusion of each period when the candidates are writing.

ENGLISH GRAMMAR.

MONDAY, JUNE 1ST :—AFTERNOON, 3.30 TO 5.

Examiners, { CHAS. E. MOYSE, B.A. / REV. J. HEPBURN, M.A. / W. CHALK, B.A. / REV. E. A. W. KING, M.A. / REV. R. HEWTON, M.A.

(*Group* A *must be attempted by all.* Answer *two* questions, but not more, from each of the Groups B. and C. Be careful in lettering and numbering your answers, and *write all that belongs to one answer on the same page or on consecutive pages.*)

(A)

1. Parse fully: Then I saw that he went on, trembling for fear of the lions.

2. Analyse the sentence you have just parsed.

3. Analyse: He became very ill. The coat costs five dollars. He walked five miles. This is a castle of the King's. He teaches me grammar.

4. (*a*) Write a short sentence in which the subject is modified by an adjective of quality and a numeral adjective, and in which the verb is intransitive and in the past perfect tense of the indicative mood.

(*b*) Write a short sentence in which the subject is modified by an adjective of quantity and by a noun in apposition, and in which the verb is transitive and in the future perfect tense, indicative mood, active voice. Give the corresponding passive form of the verb.

(*c*) Write a short sentence in which the subject is modified by a noun clause in apposition, the verb of the clause being in the second person singular, present tense, indicative mood, passive voice.

(*d*) Write a short sentence in which the subject is modified by a phrase and by an adjective clause, the verb of the principal sentence being in the future tense, indicative mood, passive voice.

(B)

1. (*a*) Explain the following terms and give one example of each: diphthong, personification, syllable, auxiliary verb, compound sentence, compound noun.

(*b*) Write the past participle of bear, sing, weave, flee, fly, shoe, rive, reeze, burst, set, dye, lie.

2. (*a*) Write the present participle of infer, suffer, abide, bid, flee, singe, dye, lie, and the second person singular of the past (indefinite) tense of the last six verbs of the list.

(*b*) In regard to each of the following nouns state its kind and when necessary to what sub-division of that kind it belongs: horse, London navy, grammar, parliament, France, tree, running, priesthood.

3. (*a*) Mention the demonstrative adjective pronouns in both numbers, and illustrate their uses. Mention the interrogative and relative pronouns, giving possessive and objective forms when they occur. Distinguish between the uses of the relative pronouns.

(*b*) Write four adjectives which do not admit of comparison. How is the comparative of adjectives regularly formed in English? What changes may occur in the form of the positive adjective which admits of regular comparison?

(C)

1. (*a*) Write the following words and attach to each the preposition which ought to be used with it: different, comply, absolve, dissent, independent, dependent, involve, bestow, conform, comply, acquit, accord.

(*b*) Illustrate the Sequence of Tenses, using in the principal sentence the following tenses of the verb *come:* present, present progressive (or continuous), present perfect (or perfect), past indefinite, past perfect, future indefinite.

2. Correct the following sentences and give as briefly, but as clearly as possible, the reasons for your corrections of those printed in italics:

Let you and I do that.

Are you taller than me?

Are either of those books mine?

Having finished reading, the volume was shut.

The fleet is laying at anchor in the bay.

I heard of him killing the lion yesterday.

Who can this be from?

Between you and I, he is wrong.

When will we land?

I cannot tell who to send.

Whom do men say that he is?

He wore a loose and a very shabby hat.

3. State the force of the italicised suffixes in sweet*en*, act*or*, maid*en*, bak*er*, lamb*kin*, gold*en*, hill*ock*, black*ish*, and of the prefixes in *anti*dote, *ex*odus, *a*vert, *a*loft, *fore*cast, *with*stand, *ut*most, *un*do. Indicate those of English origin.

ARITHMETIC.

MONDAY, JUNE 1ST:—AFTERNOON, 2 TO 3.30.

Examiners,..... { REV. PRINCIPAL ADAMS, D.C.L.
G. H. CHANDLER, M.A.
REV. R. HEWTON, M.A.

Answer questions 1, 2, 3, *and three of the remaining questions.*

1. Divide $55.80 among 2 men, 5 women, and 7 boys, so that for every 15 cents given to each boy, each woman may have 25 cents and each man 40 cents.

2. Find the difference between the simple interest and the compound interest on $240.20 for $2\frac{1}{2}$ years, at 4 per cent. per annum.

3. Find (to 4 decimal places) the square root of .05, of .005, and of .0005.

4. Divide $\frac{3}{5}$ of $\frac{3\frac{1}{7}}{2\frac{4}{9}}$ into two parts which differ from each other by $\frac{1}{5}$.

5. Add .012̇, .06̇3, and .00424̇ (the result to be a repeating decimal).

6. A watch which loses 3 minutes in 10 hours is 5 minutes fast at noon on Sunday. What time will it indicate at 2 p.m. on the following Wednesday?

7. The true length of the year is 365 24224 days. If it were assumed to be exactly 365 days, in what time would the error in reckoning amount to 10 days?

8. What is the distance in rods around the edge of an acre of ground in the form of a square?

GEOGRAPHY.

MONDAY, JUNE 1ST:—MORNING, 9 TO 10.

Examiners,..... { REV. J. HEPBURN, M. A.; CHAS. E. MOYSE, B.A.; REV. E. A. W. KING, M.A.; W. CHALK, B.A.; REV. R. HEWTON, M.A.

[Answer any *two* questions, and not more, from each group.]

I.

1. Define Isthmus, Peninsula, Strait, Promontory, Archipelago, Canal, Antipodes, Lagoon, Atoll.

2. Briefly describe the principal religions of the world, and say where they are professed.

3. Into how many elementary substances have minerals been divided? Name the principal metals. Which is the heaviest?

II.

1. Give the divisions of N. America, with their capitals.

2. Give a brief description of the Niagara River and Falls.

3. Give the divisions of the Province of Ontario, and principal cities.

III.

1. Name the principal Islands within the Province of Quebec.

2. Briefly describe *Dublin*, *London* (England), *Paris* (France), *St. Petersburg*.

3. What places are famous for the production of *tea and coffee?* What do you know of the process of cultivation?

BRITISH AND CANADIAN HISTORY.

TUESDAY, JUNE 2ND:—MORNING, 9 TO 10.30.

Examiners,..... .... { REV. R. HEWTON, M.A. / CHAS. E. MOYSE, B.A. / REV. J. HEPBURN, M.A. / REV. E. A. W. KING, M.A. / W. CHALK, B.A.

(N.B.—Answer two questions only from each division).

I.

1. Write short notes on Alfred the Great, shewing:

(*a*) Condition of the English at his accession.

(*b*) His early love of literature.

(*c*) His skill as a General.

(*d*) His abilities as a Statesman.

(*e*) His wisdom as a Ruler.

(*f*) His encouragement of learning.

2. (*a*) Give the substance of two important provisions in Magna Charta, and state:—

(*b*) Its date.

(*c*) Name of reigning king.

(*d*) Four phases of his character.

(*e*) His personal appearance.

3. (*a*) What "Period" begins with the reign of Henry VII.?

(*b*) Give the number and the names of the Sovereigns included in the Period.

(*c*) What relationship does the reign of Henry VII. bear to English History?

(*d*) State, with date, the most important event in the reign of Henry VII.

II.

4. Under the British Constitution
(*a*) What are the principal prerogatives of the Sovereign?
(*b*) What the powers of the House of Commons?
(*c*) What rights have the people in the government of the country?
(*d*) How are new laws made?
(*e*) What leads to a change of Government?

5. (*a*) What event do we commemorate on "Dominion Day?"
(*b*) What does the "Parliament of Canada" consist of?
(*c*) What are its principal powers?
(*d*) What is peculiar about the "House of Assembly" for the Province of Quebec?
(*e*) What are the powers of Provincial Parliaments?

6. Give the names of four heroes on the British side in the war of 1812 and state briefly the events connected with the names of each.

III.

7. Briefly describe the first battle of the Plains of Abraham.

8. Who was *Kondiaronk?* Give some account of him.

9. Describe Jacques Cartier's second voyage, and give a rough plan of Indian Town at Hochelaga.

NEW TESTAMENT HISTORY.

(*Gospels and Acts, as in Maclear.*)

MONDAY, 1ST JUNE:—MORNING, 11 TO 12.

Examiners, ... { REV. E. A. W. KING, M.A. / CHAS. E. MOYSE, B.A. / REV. T. HEPBURN, M.A. / W CHALK, B.A. / REV. R. HEWTON, M.A.

(N.B.—Be brief. The answers may all be well made on fifty or sixty lines of foolscap.)

I. In a single line, or less, for each, say who were: 1. Augustus. 2. John Baptist. 3. S. Peter. 4. Pilate. 5. S. Stephen.

II. On a small skeleton map of five or six inches square mark R. Jordan L. Genesaret, Nazareth, Samaria, Cæsarea.

III. Name any five diseases healed by our Lord. 2. How many lists of the Apostles' names are there? 3. Why is Jesus called "The Lamb of God"? 4. In what city did the first Christian believers assemble for worship?

IV. Explain: 1. The mode of "sitting at meat." 3. The value of "a penny", in our money. 3. Any burial custom of the Holy Land.

V. Name any cause of dispute among the Apostles. 2. To whom did Christ first appear after His Resurrection? 3. What was the manner of Herod's death? 4. Name all the persons present at "The Transfiguration."

VI. Whom did Christ raise from the dead? 2. Mention anything that happened at Lystra.

VII. Name any miracles, or parables, or discourses of our Lord, making up ten in all.

VIII. From what spot did Jesus ascend? 2. Name the sin and punishment of Ananias and Sapphira. 3. Name any of S. Paul's missionary companions. 4. In what century were the Gospels and Acts written?

IX. Mention any five places touched at in S. Paul's voyage to Rome.

X. Make a note in not more than five lines of any facts or incidents of S. Paul's life or character.

OPTIONAL SUBJECTS.

LATIN.

TUESDAY, JUNE 2ND:—AFTERNOON, 2 TO 5.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
VERY REV. DEAN NORMAN, D.C.L.
A. J. EATON, M.A., PH.D.

[NOTE.—*The answers to questions in groups* (*A*), (*B*) *and* (*C*), *severally, to be written and handed in on separate papers.*]

(A) Virgil, Aeneid, Book I.

1. Translate:—

(*a*) Interea magno misceri murmure pontum,
emissamque hiemem sensit Neptunus et imis
stagna refusa vadis, graviter commotus; et alto
prospiciens, summa placidum caput extulit unda.
Disiectam Aeneae toto videt aequore classem,
fluctibus oppressos Troas caelique ruina;
nec latuere doli fratrem Iunonis et irae.

(*b*) Illi se praedae accingunt dapibusque futuris :
tergora deripiunt costis et viscera nudant ;
pars in frusta secant veribusque trementia figunt ;
litore aena locant alii flammasque ministrant.
Tum victu revocant vires, fusique per herbam
implentur veteris Bacchi pinguisque ferinae.
Postquam exempta fames epulis mensaeque remotae
amissos longo socios sermone requirunt,
spemque metumque inter dubii, seu vivere credant,
sive extrema pati, nec iam exaudire vocatos.

(*c*) Parce metu, Cytherea ; manent immota tuorum
fata tibi ; cernes urbem et promissa Lavini
moenia, sul limemque feres ad sidera caeli
magnanimum Aenean ; neque me sententia vertit.
Hic—tibi fabor enim, quando haec te cura remordet,
longius et volvens fatorum arcana movebo—
bellum ingens geret Italia, populosque ferocis
contundet, moresque viris et moenia ponet,
tertia dum Latio regnantem viderit aestas,
ternaque transierint Rutulis hiberna subactis.

2. Translate and explain the following :—

(1) dives opum. (2) sunt mihi bis septem praestanti corpore nymphae. (3) quis ante ora patrum Troiae sub moenibus altis contigit oppetere (4) lacrimis oculos suffusa nitentes.

3. Give the principal tenses, first person only, of foveo, infigo, capesso, tollo, frango, seco, parco.

4. Derive secura, inimica, secundo, onerarat, velivolum, hiberna, remigio.

(B)

I. Caesar, Gallic War, Bk. I.

1. Translate :—

(*a*) Caesar hac oratione Lisci Dumnorigem, Divitiaci fratrem, designari sentiebat, sed, quod *pluribus* praesentibus eas res iactari nolebat, celeriter concilium dimittit, Liscum retinet. Quaerit ex solo ea, quae in conventu *dixerat*. Dicit liberius atque audacius. Eadem secreto ab aliis quaerit ; repperit esse vera : Ipsum esse Dumnorigem, summa *audacia*, magna apud plebem propter liberalitatem gratia, cupidum *rerum* novarum. *Compluris* annos portoria reliquaque omnia Aeduorum vectigalia parvo pretio redempta habere, propterea quod illo licente contra liceri audeat nemo. His rebus et suam rem familiarem *auxisse* et facultates ad largiendum magnas comparasse ; magnum numerum equitatus suo sumptu semper

atere et circum se habere, neque solum *domi*, sed etiam apud finitimas civitates largiter posse.

(*b*) Dum haec in colloquio *geruntur*, Caesari nuntiatum est, equites Ariovisti propius *tumulum* accedere et ad nostros adequitare, lapides telaque in nostros conicere. Caesar loquendi finem facit seque ad suos recepit suisque imperavit, ne quod omnino telum in hostes *reicerent*. Nam etsi sine ullo periculo legionis delectae cum equitatu proelium fore videbat, tamen *committendum* non putabat, ut pulsis hostibus dici *posset* eos ab se per fidem in colloquio circumventos.

2. Explain the construction of the italicized words in these extracts, stating, where possible, the rules of syntax.

3. Give the principal parts of *nolebat*, *quaerit*, *repperit*, *audeat*, *conicere*, *pulsis* (marking all known *long* vowels).

4 (*a*) Give the divisions of Gaul according to Caesar. (*b*) How did *Gallia* in its extent correspond with modern France? (*c*) What was the date of Caesar's first campaign in Gaul? (*d*) Write out in full *a. d. V. Kal. Apr., L. Pisone, A. Gabinio coss.*, and give the date according to the English notation.

II. Cicero, in Catilinam, I. and II.

1. Translate :—

(*a*) Nunc, ut a me, patres conscripti, quandam prope iustam patriae querimoniam detester ac deprecer, percipite, quaeso, diligenter quae dicam et ea penitus animis vestris mentibusque mandate. Etenim si mecum patria, quae mihi vita mea multo est carior, si cuncta Italia, si omnis res publica, loquatur: M. Tulli, quid agis? Tune eum, quem esse hostem comperisti, quem ducem belli futurum vides, quem exspectari imperatorem in castris hostium sentis, auctorem sceleris, principem coniurationis, evocatorem servorum et civium perditorum, exire patiere, ut abs te non emissus ex urbe, sed immissus in urbem esse videatur? Non hunc in vincula duci, non ad mortem rapi, non summo supplicio mactari imperabis?

(*b*) Sed cur tam diu de uno hoste loquimur, et de hoste qui iam fatetur se esse hostem, et quem, quia (quod semper volui) murus interest, non timeo: de eis qui dissimulant, qui Romae remanent, qui nobiscum sunt, nihil dicimus? Quos quidem ego, si ullo modo fieri possit, non tam ulcisci studeo quam sanare sibi ipsos, placare rei publicae, neque id qua re fieri non possit, si me audire volent, intellego. Exponam enim vobis, Quirites, ex quibus generibus hominum istae copiae comparentur: deinde singulis medicinam consili atque orationis meae, si quam potero, adferam.

2. (*a*) What *case* is *M. Tulli?* Explain the form. (*b*) In what *mood* and *tense* is *patiere?* Give the principal parts of this verb. (*c*) What is the usual construction after *impero?*

3. (*a*) *Quod semper volui:* what is the antecedent of *quod?* (*b*) Give the principal parts of *remanent* and *intellego.* (*c*) Why is *comparentur* in the Subjunctive? (*d*) What is the object of *timeo* in the last extract? What other case may it govern, and with what change of meaning?

(C) Latin Grammar.

1. Decline *puer*, princeps, caput, pater, Aeneas; iusiurandum.* Decline together *vir liber, unus quisquam.*

2. Compare *malus, dives, felix, idoneus, facilis.*

3. Write down in Latin the *cardinal* numbers from *ten* to *twenty-five.* Decline *tres.*

4. Inflect in the present, imperfect, and future indicative, active and passive, *audio, fero;* in the imperfect and pluperfect subjunctive, *prosum volo.* Give the imperative, in all its forms, of *fero.*

5. Enumerate the classes of Pronouns in Latin, and give an example of each. Decline *ipse.*

6. (*a*) How is the *Agent* expressed in Latin? Give an example. (*b*) Express in Latin: *at Carthage, at home, in the country.* What case is used in such expressions? (*c*) What are the Rules of Gender for nouns of the Fourth and Fifth declensions? (*d*) How is the first person of the imperative supplied?

7. Translate into Latin:—(*a*) In Caesar's time, Gaul was divided into three parts. (*b*) With the Germans, who lived very near, the Belgae were constantly waging war. (*c*) Orgetorix prevails on the Helvetii to go forth from their borders. (*d*) In the year eighteen hundred and ninety-one.

* In the answers to questions 1-5, you are requested to mark by the usual sign all *long* vowels.

GREEK.

Wednesday, June 3rd:—Afternoon, 2 to 5.

Examiners, ... { Rev. George Cornish, LL.D.; Very Rev. Dean Norman, D.C.L.; A. J. Eaton, M.A., Ph.D.

(A) Xenophon, Anabasis, Book I.

1. Translate:—

(*a*) Ἐγὼ γὰρ ὀκνοίην μὲν ἂν εἰς τὰ πλοῖα ἐμβαίνειν ἃ ὑμῖν δοίη, μὴ ὑμᾶς αὐταῖς ταῖς τριήρεσι καταδύσῃ· φοβοίμην δ' ἂν τῷ ἡγεμόνι ᾧ δοίη ἕπεσθαι, μὴ ὑμᾶς ἀγάγῃ ὅθεν οὐχ οἷόν τε ἔσται ἐξελθεῖν· βουλοίμην δ' ἂν ἄκοντος ἀπιὼν

Κύρου λαθεῖν αὐτὸν ἀπελθών. ὃ οὐ δυνατόν ἐστιν. Ἀλλ' ἐγώ φημι ταῦτα μὲν φλυαρίας εἶναι· δοκεῖ δέ μοι ἀνδρας ἐλθόντας πρὸς Κῦρον, οἵτινες ἐπιτήδειοι, σὺν Κλεάρχῳ ἐρωτᾶν ἐκεῖνον, τί βούλεται ἡμῖν χρῆσθαι· καὶ ἐὰν ἡ πρᾶξις ἡ παραπλησία οἵαπερ καὶ πρόσθεν ἐχρῆτο τοῖς ξένοις, ἕπεσθαι καὶ ἡμᾶς, καὶ μὴ κακίους εἶναι τῶν πρόσθεν τούτῳ συναναβάντων.

(*b*) *Καὶ τὸ μὲν τὰ μεγάλα νικᾶν τοὺς φίλους εὖ ποιοῦντα οὐδὲν θαυμαστόν, ἐπειδή γε καὶ δυνατώτερος ἦν· τὸ δὲ τῇ ἐπιμελείᾳ περιεῖναι τῶν φίλων καὶ τῷ προθυμεῖσθαι χαρίζεσθαι, ταῦτα ἔμοιγε μᾶλλον δοκεῖ ἀγαστὰ εἶναι. Κῦρος γὰρ ἔπεμπε βίκους οἴνου ἡμιδεεῖς πολλάκις, ὁπότε πάνυ ἡδὺν λάβοι, λέγων ὅτι οὔπω δὴ πολλοῦ χρόνου τούτου ἡδίονι οἴνῳ ἐπιτύχοι· τοῦτον οὖν σοὶ ἔπεμψε καὶ δεῖταί σου τήμερον τοῦτου ἐκπιεῖν σὺν οἷς μάλιστα φιλεῖς. Πολλάκις δὲ χῆνας ἡμιβρώτους ἔπεμπε καὶ ἄρτων ἡμίσεα καὶ ἄλλα τοιαῦτα, ἐπιλέγειν κελεύων τὸν φέροντα· Τούτοις ἥσθη Κῦρος· βούλεται οὖν καὶ σὲ τοῦτων γεύσασθαι.*

2. Translate and explain :—(1) *εὐνοικῶς ἔχοιεν αὐτῳ.* (2) *ὅπως ὅ τι ἀπαρασκευότατον λάβοιβασιλέα.* (3) *τοῦτο δ' αὖ οὕτω τρεφόμενον ἐλάνθανεν αὐτῷ τὸ στράτευμα.* (4) *Μικρὸν ἐξέφυγε τὸ μὴ καταπετρωθῆναι.* (5) *Πολὺ δὲ καὶ σήσαμον καὶ μελίνην καὶ κέγχρον καὶ πυροὺς καὶ κρόμμυα φέρει.*

3. Explain the constructions or idioms illustrated in the following short sentences :—(1) *ὡς ἀποκτενῶν,* (2) *τῇ δ' ὑστεραίᾳ,* (3) *ἃ νομίζεται,* (4) *τοῦ ἀθρόιζειν στρατεύμα,* (5) *εἰ τῳ σπείσαιτο καὶ εἴ τῳ συνθοῖτο, μηδὲν ψεύδεσθαι.*

4. Give the 1st person singular of the 1st Future, Perfect, and either Aorist of *ἐσθίω, λανθάνω, ἀφικνέομαι, καίω, βαίνω, ὑπισχνέομαι, δείδω, ὑρίσκω.*

(B) Homer, Iliad, Book IV.

1. Translate :—

(*a*) *Ὣς ἔφαθ', αἱ δ' ἐπέμυξαν Ἀθηναίη τε καὶ Ἥρη.*
Πλησίαι αἳ γ' ἧσθην, κακὰ δὲ Τρώεσσι μεδέσθην.
Ἦτοι Ἀθηναίη ἀκέων ἦν οὐδέ τι εἶπεν,
Σκυζομένη Διῒ πατρὶ, χόλος δέ μιν ἄγριος ἦρει·
Ἥρη δ' οὐκ ἔχαδε στῆθος χόλον, ἀλλὰ προσηύδα·
" Αἰνότατε Κρονίδη, ποῖον τὸν μῦθον ἔειπες.
Πῶς ἐθελεις ἅλιον θεῖναι πόνον ἠδ' ἀτέλεστον,
Ἰδρῶ θ' ὃν ἵδρωσα μόγῳ, καμέτην δέ μοι ἵπποι
Λαὸν ἀγειρούσῃ, Πριάμῳ κακὰ τοῖό τε παισίν.
Ἔρδ'· ἀτὰρ οὔ τοι πάντες ἐπαινέομεν θεοὶ ἄλλοι."

(*b*) *Ὦ υἱὲ Πετεῶο διοτρεφέος βασιλῆος.*
Καὶ σὺ, κακοῖσι δόλοισι κεκασμένε, κερδαλεόφρον,
Τίπτε καταπτώσσοντες ἀφέστατε, μίμνετε δ' ἄλλους;
Σφῶϊν μέν τ' ἐπέοικε μετὰ πρώτοισιν ἐόντας
Ἑστάμεν ἠδὲ μάχης καυστειρῆς ἀντιβολῆσαι·
Πρώτω γὰρ καὶ δαῖτὸς ἀκουάζεσθον ἐμεῖο,
Ὁππότε δαῖτα γέρουσιν ἐφοπλίζωμεν Ἀχαιοί.
Ἔνθα φίλ' ὀπταλέα κρέα ἔδμεναι ἠδὲ κύπελλα
Οἴνου πινέμεναι μελιηδέος, ὄφρ' ἐθέλητον·
Νῦν δὲ φίλως χ' ὁρόῳτε καὶ εἰ δέκα πύργοι Ἀχαιῶν
Ὑμείων προπάροιθε μαγοίατο νηλέϊ χαλκῷ."

2. (*a*) From what present indicatives are *ἧσθην, μεδέσθην, ἧρει, κεκάσμενε, καμέτην* formed? (*b*) Give the verb stem and principal parts of *ἧρει, ἀγειρούσῃ, ἔρδε, ἑστάμεν, ἐδμεναι, ὁρόῳτε.* (*c*) Write the Attic forms of *καμέτην, τοῖο, βασιλῆος, κακοῖσι, ἐόντας, ἐδμεναι, ὁρόῳτε, μαχοίατο.*

3. (*a*) Account for the following cases: *Τρώεσσι, Ἥρῃ, χαλκῷ.* (*b*) Explain the use of the mood of *ἐφοπλίζωμεν, ἐθέλητον, ὁρόῳτε, μαχοίατο.*

4. Scan the first two lines of Ext. (*a.*

(C) Greek Grammar.

1. Decline *πολίτης, δῶρον, νοῦς, λέων, ἅλς, ναῦς.*

2. What is the *stem* of a noun? Give the stem of *λογος, λέων, ποῦς, τιθείς, γένος.*

3. Compare *σοφός, ἡδύς, μέσος, καλός.* Form adverbs from *ἀληθής, πᾶς, πολύς.*

4. Decline *οἷος.* Distinguish between *τίς* and *τὶς, ἄλλα* and *ἀλλά, αὐτὸς ὁ ἀνήρ* and *ὁ αὐτὸς ἀνήρ.*

5. What is the *verb stem* of *λύω*? What are the *tense stems* of this verb? Name the *primary* (or *principal*) tenses and the *secondary* (or *historical*) tenses.

6. Inflect the present, imperfect, and perfect indicative, active, of *λύω*; second aorist middle of *λείπω*; present tense of the subjunctive, optative, and imperative, passive, of *δίδωμι.*

7. (*a*) Write down the principal parts of *πείθω, τίθημι, φέρω, γράφω, φιλέω.* (*b*) Where are the following words made, and from what present indicatives: *ἔπαθεν, ἐγένετο, τιμᾶν, ἰέναι, λελοίπασι?*

8. Express in Greek: *he gave the money* (*χρήμα*) *to the man; the buildings* (*οἰκήμα*) *fell* (*πίπτω*); *the city became great; we do* (*ποιέω*) *these things; he teaches the boys music* (*μουσική*).

FRENCH.

(N.B.—Let the candidates write the Dictation, the first part and the second part on *three* different papers.)

JUNE 3RD :—MORNING, 10.30 TO 12.30.

Examiners,..... { REV. PROF. COUSSIRAT, B.A., B.D., OFFICIER D'ACADÉMIE. REV. J. L. MORIN, M.A.

I.

1. Traduisez :—

(*a*) J'ai lu, dans quelque endroit, qu'un meunier et son fils
L'un vieillard, l'autre enfant, non pas des plus petits,
Mais garçon de quinze ans, si j'ai bonne mémoire,
Allaient vendre leur âne un certain jour de foire.
Afin qu'il fût plus frais et de meilleur débit,
On lui lia les pieds, on vous le suspendit.
Puis cet homme et son fils le portent comme un lustre.....
Le premier qui les vit de rire s'éclata.
" Quelle farce," dit-il, " vont jouer ces gens-là ?
Le plus âne des trois n'est pas celui qu'on pense."

(*b*) Vous me demandez des conseils ; il ne vous en faut point d'autres que votre goût. Je vous invite à ne lire que les ouvrages qui sont depuis longtemps en possession des suffrages du public, et dont la réputation n'est point équivoque, il y en a peu ; mais on profite bien davantage en les lisant qu'avec tous les mauvais petits livres dont nous sommes inondés.

2. (*a*) Conjuguez le passé défini du verbe *lire*.
(*b*) " le présent du subjonctif de *aller*.
(*c*) " l'imparfait du subjonctif de *suspendre*.
(*d*) Pourquoi dans " afin qu'il fût " le verbe est-il au subjonctif ?
(*e*) Quelles remarques grammaticales faut-il faire sur ces expressions : " On *vous* le suspendit," " de rire *s'*éclata " ?
(*d*) Corrigez, s'il y a lieu, les phrases suivantes, en énonçant les règles :—

Le livre qu'il a *lu ;* la fable qu'il a *récité ;* les personnes qu'il a *vu ;* les chaleurs qu'il a *fait ;* je m'*en* rappelle ; il a *une* tête de plus que moi.

II.

3. Traduction de l'anglais en français :—

He received me with his hat on his head, and came toward me without the least inclination of body ; but there was more politeness in the open air of his face than in carrying in the hand what is made to cover the head.

"Friend," said he to me; "I see that you are a stranger. If I can be of any use to you, you have only to speak." "Sir," said I to him, in bending the body, and slipping one foot toward him, according to our custom, "I flatter myself that my curiosity will not displease you, and that you will do me the honor to instruct me in your religion." "The people of your country," he answered me, "pay too many compliments, but I have not yet seen any one of them who had the same curiosity as you."

4. Phrases à traduire :—

Je vous prie de vous dépêcher; je suis bien pressé. Maintenant pouvez-vous nous indiquer un bon hôtel? Voulez-vous que nous allions faire un tour de promenade? Il n'est pas agréable de voyager seul. Comment vous êtes-vous porté depuis que je n'ai eu le plaisir de vous voir? Je suis enrhumé depuis plusieurs jours. Il fait un temps de printemps. Il fait une chaleur étouffante aujourd'hui. Donnez-moi un morceau de fromage. Vous m'en donnez trop, partagez ce morceau en deux? Quel âge avez-vous, mon ami? J'ai trente-cinq ans et huit mois. Il n'y a rien à redire dans cet ouvrage. Il me tardait de vous voir.

DICTEE.

(*Pour les maîtres seuls.*)

Lorsque j'arrivai à Paris, je fus regardé comme si j'avais été envoyé du ciel; vieillards, hommes, femmes, enfants, tous voulaient me voir. Si je sortais, tout le monde se mettait aux fenêtres; si j'étais aux Tuileries, je voyais aussitôt un cercle se former autour de moi, les femmes même faisaient un arc-en-ciel nuancé de mille couleurs qui m'entourait. Si j'étais au spectacle, je trouvais d'abord cent lorgnettes dressées contre ma figure; enfin, jamais homme n'a été tant vu que moi. Je souriais quelquefois d'entendre des gens qui n'étaient presque jamais sortis de leur chambre, qui disaient entre eux: "Il faut avouer qu'il a l'air bien persan".....Cela me fit résoudre à quitter l'habit persan, et à en endosser un à l'européenne, pour voir s'il resterait encore dans ma physionomie quelque chose d'admirable."—*Montesquieu.*

GERMAN.

FRIDAY JUNE 5TH:—Morning, 9 TO 10.30.

Examiner,..... A. J. EATON, Ph. D.

I. Translate:

„Das will ich euch sagen: Ihr dürft nur Achtung geben, welcher den Hut auf dem Kopfe behalten wird, wann alle Andern sich ehrerbietig werden entblößt haben."

Alſo ritten ſie mit einander in Paris hinein, und zwar das Bäuerlein auf der rechten Seite des Königs: denn was die liebe Einfalt, es ſei mit Abſicht oder durch Zufall, Ungeſchicktes thun kann, das thut ſie. Der Bauer gab dem König auf alle ſeine Fragen geſprächige Antwort. Er erzählte ihm Manches über den Feldbau, aus ſeiner Haushaltung und wie er zuweilen des Sonntags auch ſein Huhn in dem Topfe habe, und merkte lange nichts. Als er aber ſah, wie alle Fenſter ſich öffneten und alle Straßen ſich mit Menſchen anfüllten, wie Jedermann ehrerbietig auswich, da ging ihm ein Licht auf. Mein Herr, ſagte er zu ſeinem unbekannten Begleiter, den er mit Aengſtlichkeit und Verwunderung anſchaute, „entweder ſeid ihr der König oder ich bin's; denn wir Beide haben allein noch den Hut auf dem Kopfe."

Da lächelte der König und ſagte: „Ich bin's. Wann ihr euer Rößlein in den Stall geſtellt und euer Geſchäft beſorgt habt, ſo kommt zu mir auf mein Schloß; ich will euch dann mit einer Mittagsſuppe aufwarten und euch den Dauphin zeigen."

1. Conjugate throughout the present indicative and subjunctive: dürfen and können.

2. Give the principal parts of geben, reiten, ſehen.

3. Accent Ungeſchicktes, anfüllten, auswich).

4. ..... auch ſein Huhn in dem Topfe habe. Why the subjunctive?

5. da ging ihm ein Licht auf.. Distinguish between Lichter and Lichte.

6. Give the plural of Abſicht, Bauer, Huhn, and state the gender of Zufall, Topf, Fenſter.

II. Translate: 1. Are you satisfied with these books? 2. Yes I am satisfied with them. 3. Have you paid him yet for the hat? 4. Yes, I have paid him for it. 5. How much did you pay for it? 6. Was it your cousin's? 7. No, it was my sister's. 8. Are those your horses?

III. Conjugate throughout the present indicative and subjunctive of tadeln, and give the past part. of ſtudieren.

IV. Decline das Herz, der Schmerz, der Fels, der Name.

V. What cases do the following prepositions govern: nebſt, von, um, zuwider, oberhalb, nächſt, aus.

VI. Name six prepositions, which govern both the dative and accusative.

VII. Translate: 1. The doctor shook (ſchütteln) his head, for he had no hope. (Hoffnung) 2. Ask him, whether (ob) she was right. 3. For a boy of five years he is very large. 4. At whose house does your friend live now? 5. He asked me which of those gentlemen was my brother. 6. What kind of wood have you bought? 7. The gentleman in whose house you live, has gone (reiſen) to France. 8. I, who am your friend. 9. Would the boy have been sent (ſchicken) home, if he had not been naughty (unartig)? 10. By whom was the child saved (retten) when the house was burning (brennen)? 11. Is the dinner served (ſervieren)? 12. No, it is being served. 13. The carriage of the count will be sold to-day.

GEOMETRY.

WEDNESDAY, JUNE 3RD:—MORNING, 9 TO 10.30.

Examiners,..... .... { REV. PRINCIPAL ADAMS, D.C.L. / G. H. CHANDLER, M.A. / REV. R. HEWTON, M.A.

Answer five of the six questions. Answer concisely; avoid repetitions. Ordinary symbols and abbreviations may be used.

1. A parallelogram has its opposite sides and angles equal, and is bisected by either diagonal.

Show that the diagonals of a square bisect each other at right angles.

If the diagonals of a quadrilateral bisect each other at right angles, is the figure a square? Give your reasons.

2. If the square described on one side of a triangle be equal to the squares on the other two sides, prove that the triangle is right-angled.

The sides of a triangle are 5, 12 and 13; is the triangle right-angled.

3. In obtuse-angled triangles the square on the side subtending the obtuse angle is equal to the squares on the sides containing that angle, together with twice the rectangle contained by either of those sides and the line between the obtuse angle and the foot of the perpendicular on that side from the opposite angle.

Alſo ritten ſie mit einander in Paris hinein, und zwar das Bäuerlein auf der rechten Seite des Königs; denn was die liebe Einfalt, es ſei mit Abſicht oder durch Zufall, Ungeſchicktes thun kann, das thut ſie. Der Bauer gab dem König auf alle ſeine Fragen geſprächige Antwort. Er erzählte ihm Manches über den Feldbau, aus ſeiner Haushaltung und wie er zuweilen des Sonntags auch ſein Huhn in dem Topfe habe, und merkte lange nichts. Als er aber ſah, wie alle Fenſter ſich öffneten und alle Straßen ſich mit Menſchen anfüllten, wie Jedermann ehrerbietig auswich, da ging ihm ein Licht auf. Mein Herr, ſagte er zu ſeinem unbekannten Begleiter, den er mit Aengſtlichkeit und Verwunderung anſchaute, „entweder ſeid ihr der König oder ich bin's; denn wir Beide haben allein noch den Hut auf dem Kopfe."

Da lächelte der König und ſagte: „Ich bin's. Wann ihr euer Rößlein in den Stall geſtellt und euer Geſchäft beſorgt habt, ſo kommt zu mir auf mein Schloß; ich will euch dann mit einer Mittagsſuppe aufwarten und euch den Dauphin zeigen."

1. Conjugate throughout the present indicative and subjunctive: dürfen and können.

2. Give the principal parts of geben, reiten, ſehen.

3. Accent Ungeſchicktes, anfüllten, auswich.

4. ..... auch ſein Huhn in dem Topfe habe. Why the subjunctive?

5. da ging ihm ein Licht auf.. Distinguish between Lichter and Lichte.

6. Give the plural of Abſicht, Bauer, Huhn, and state the gender of Zufall, Topf, Fenſter.

II. Translate: 1. Are you satisfied with these books? 2. Yes I am satisfied with them. 3. Have you paid him yet for the hat? 4. Yes, I have paid him for it. 5. How much did you pay for it? 6. Was it your cousin's? 7. No, it was my sister's. 8. Are those your horses?

III. Conjugate throughout the present indicative and subjunctive of tadeln, and give the past part. of ſtudieren.

IV. Decline das Herz, der Schmerz, der Fels, der Name.

V. What cases do the following prepositions govern: nebſt, von, um, zuwider, oberhalb, nächſt, aus.

VI. Name six prepositions, which govern both the dative and accusative.

VII. Translate: 1. The doctor shook (ſchütteln) his head, for he had no hope. (Hoffnung) 2. Ask him, whether (ob) she was right. 3. For a boy of five years he is very large. 4. At whose house does your friend live now? 5. He asked me which of those gentlemen was my brother. 6. What kind of wood have you bought? 7. The gentleman in whose house you live, has gone (reiſen) to France. 8. I, who am your friend. 9. Would the boy have been sent (ſchicken) home, if he had not been naughty (unartig)? 10. By whom was the child saved (retten) when the house was burning (brennen)? 11. Is the dinner served (ſervieren)? 12. No, it is being served. 13. The carriage of the count will be sold to-day.

GEOMETRY.

WEDNESDAY, JUNE 3RD:—MORNING, 9 TO 10.30.

Examiners, ... REV. PRINCIPAL ADAMS, D.C.L.; G. H. CHANDLER, M.A.; REV. R. HEWTON, M.A.

Answer five of the six questions. Answer concisely; avoid repetitions. Ordinary symbols and abbreviations may be used.

1. A parallelogram has its opposite sides and angles equal, and is bisected by either diagonal.

Show that the diagonals of a square bisect each other at right angles.

If the diagonals of a quadrilateral bisect each other at right angles, is the figure a square? Give your reasons.

2. If the square described on one side of a triangle be equal to the squares on the other two sides, prove that the triangle is right-angled.

The sides of a triangle are 5, 12 and 13; is the triangle right-angled.

3. In obtuse-angled triangles the square on the side subtending the obtuse angle is equal to the squares on the sides containing that angle, together with twice the rectangle contained by either of those sides and the line between the obtuse angle and the foot of the perpendicular on that side from the opposite angle.

If the obtuse angle gradually increase and finally become two right angles, what does the proposition become ?

4. To describe a square which shall be equal to a given rectilineal figure.

How would you use I.47 to make a square which would be double a given square ?

5. Equal chords in a circle are equally distant from the centre.

If any number of chords of a circle are equal, how could you describe a circle which would touch all of the chords ?

6. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

If one side of the quadrilateral be produced, show that the exterior angle is equal to the interior and opposite angle.

ALGEBRA.

TUESDAY, JUNE 2ND:—MORNING, 10.30 TO 12.

Examiners, ... { REV. PRINCIPAL ADAMS, D.C.L.; G. H. CHANDLER, M.A.; REV. R. HEWTON, M.A.

1. Find the factors of $x^2 - x - 6$, $3x^2 - 4x + 1$, $6x^2 - x - 2$, $x^6 - y^6$, $x^6 + y^6$.

2. Show that $\frac{1}{x^2 - 5x + 6} - \frac{2}{x^2 - 4x + 3} + \frac{1}{x^2 - 3x + 2} = 0$.

3. Show that $16 + \left\{\frac{x+a}{x-a} + \frac{x-a}{x+a} - 2\,\frac{x^2-a^2}{x^2+a^2}\right\}^2 = 16\left(\frac{x^4+a^4}{x^4-a^4}\right)^2$

4. Reduce $\frac{4x^2 - 12ax + 9a^2}{8x^3 - 27a^3}$ to its lowest terms.

5. Find the square root of
$$4x^4 - 12x^3 + 25x^2 - 24x + 16.$$

6. The sides of a triangle are $x^2 + y^2$, $x^2 - y^2$, and $2xy$; show that the triangle is right-angled.

7. Solve the equation
$$\frac{6x + 8}{2x + 1} - \frac{2x + 38}{x + 12} = 1.$$

8. Solve the simultaneous equations
$$\left.\begin{aligned} \frac{x + 11}{10} + \frac{y - 4}{6} &= x - 7 \\ \frac{x + 5}{7} - \frac{y - 7}{3} &= 3y - x \end{aligned}\right\}$$

N.B.—The answers to questions 7 and 8 are to be verified by substitution

TRIGONOMETRY.

FRIDAY, JUNE 5TH :—MORNING, 10.30 TO 12.

Examiners, ... { REV. PRINCIPAL ADAMS, D.C.L.
G. H. CHANDLER, M.A.

1. Turn 216° 43′ 54″ into grades, etc., and into circular measure.

2. From cosec $x = \frac{4}{3}$ find the five other ratios of x.

3. What is the sine of 60° ? Prove that it is equal to the cosine of 30° and of 330°.

Give also, with figures in all cases, the cosine of 150° and of 210°.

4. Trace the changes of the tangent and cotangent as the angle increases from 0 to 4 right angles.

Having proved that $\tan x + \cot x = 2 \operatorname{cosec} 2x$, trace the changes in the sum of the tangent and cotangent as the angle increases.

5. Prove that

$$\cos (A \pm B) = \cos A \cos B \mp \sin A \sin B,$$

and deduce

$$\cos K + \cos L = 2 \cos \frac{K + L}{2} \cos \frac{K - L}{2}$$

6. A flagstaff is placed on the top of a column ; the flagstaff by itself is half as high as the column by itself ; the angles of elevation (from a point above the base of the column) of the top of the column and flagstaff when in position are 30° and 60°, respectively. The height of the column being 100 feet, find how far, in a horizontal direction, the point of observation must be from the column.

GEOMETRICAL AND FREEHAND DRAWING.

FRIDAY, JUNE 5TH :—2 TO 5 P. M.

Examiner, ... C. H. MCLEOD, MA.E.

1. Construct an equilateral triangle, the altitude (vertical height) of which is 2 inches.

2. Given a circle of 2 ins. diameter and a line without the circle, draw a tangent to the circle parallel to the given line.

3. Draw the cycloid generated by a circle 1.5 in. in diameter.

4. Construct a triangle, the sides of which are 2, 3 and 4 inches long, and describe a circle about the triangle.

5. Sketch an example of Greek or Romanesque or Celtic ornament.

6. Represent the appearance of a cone when placed below the level of the eye, with the axis nearly perpendicular to the line of sight and the base towards you.

7. Make a freehand copy, slightly enlarged, of the ornament before you.

8. Make a freehand drawing of the objects before you as they appear from your point of view :—

(*a*) An hexagonal prism.

(*b*) A ring of square section.

NOTE.—In the problems 5, 6, 7 and 8 do not use any instrument whatever; the questions are for *strictly freehand* work. The first four questions are instrumental. Show all construction lines as light or dotted lines, and obtain all results by *direct construction*, not by *trial*.

NATURAL PHILOSOPHY.

SATURDAY, JUNE 6TH :—AFTERNOON, 2 TO 3.30.

Examiners,..... { REV. PRINCIPAL ADAMS, D.C.L.
G. H. CHANDLER, M.A.

(*Answer two questions from each division.*)

I.

1. Find the centre of gravity of a triangle ; also of three ounce weights placed at the corners of a triangle ; also of weights of one, two and three ounces placed at the corners of any triangle.

2. Find the relation of the Power to the Weight in the 3 systems of Pulleys, and also in the Inclined Plane when the Power acts parallel to the Plane.

3. What force will keep in equilibrium two forces of 3 and 4 acting at right angles ?

Can forces 3, 4 and 6 cause equilibrium ? Give your reasons.

II.

4. Compare the spaces described in one minute by two trains on parallel rails ; the first passes a station at a uniform velocity of 20 miles per hour, the second in the given minute gradually increases its velocity from rest to 20 miles per hour.

5. From the edge of a precipice one body is let fall, another shot verti-

cally upwards with a velocity of 320 feet per second. If perfectly free to rise or fall, how far will they be apart in 10 seconds? How far can the latter body rise?

6. How far does a body fall under the action of gravity in the first second? In the first half second?

What are the times in which a body falls the first 32 feet, and the second 32 feet of its fall?

III.

7. What are the conditions that a body should float in a liquid?

An iceberg (sp. gr. 0.918) floats in seawater (sp. gr. 1.028); find how much of the iceberg is above and below the water's surface.

8. If silver (sp. gr. 10.47) and copper (sp. gr. 8.88) are mixed in the proportion of 2 to 7 by weight, find the specific gravity of the compound.

9. What do you know of fluid pressure, its intensity, its variation in a uniform liquid, its direction on a surface, its relative transmissibility. Give a hydrostatic paradox, and explain the statement that liquids find their level.

ENGLISH LANGUAGE.

MEIKLEJOHN'S *English Language*, Parts I., II., III.; TRENCH, *Study of Words*.

SATURDAY, JUNE 6TH:—MORNING, 10.30 TO 12.

Examiners, ... { CHAS. E. MOYSE, B.A.; REV. PRINCIPAL ADAMS, M.A.; W. CHALK, B.A.

(Answer group A, any one question in group B, any one question in group C, any two questions in group D, and any four questions in group E.)

A.

Analyse: (*a*) I am one whom the vile blows and buffets of the world have so incensed, that I amreckless. (*b*) If to the foregoing sentence the clause *what I do to spite the world* is added, state what kind of clause it is, and to what it belongs.

B.

1. (*a*) What two laws must a perfect alphabet keep unbroken? Show that the English alphabet violates both. (*b*) Give an example of a proper noun used as a common noun and of an abstract noun used as a collective, noun. (*c*) Mention the English suffixes still used to denote gender. Illustrate.

2. (*a*) Write the plurals of son-in-law, spoonful, knight-templar, cherub, miasma, genus, species, dilettante. (*b*) What verbs take two objects? Illustrate. (*c*) Write sentences in which run, work, and walk are transitive verbs. (Do not use cognate accusatives).

3. (*a*) Give the causative forms which correspond to bite, rise, fall, set lie. (*b*) Write the simple future (singular only) of *go* and the future of determination and authority ("emphatic" future) of the same verb. (*c*) Distinguish between the infinitives in: I want to see him; I went to see him.

C.

1. (*a*) Classify adverbs, and give two examples of each class. (*b*) Give the etymology of Birdcage Walk, hawthorn, dirge, butler, sexton.

2. (*a*) Give the etymology of bustard, clove, drawing-room, penthouse wassail. (*b*) After each of these words, write a meaning it bore once but rarely or never bears now: censure, conceit, cunning, danger, disease, insolent, sad, secure, usury, worm.

3. (*a*) Define and illustrate the following figures of speech: Metaphor' Synecdoche, Metonymy, Hyperbole. (*b*) State the conditions which must be obeyed in order to produce good rhyme. (*c*) Define stanza, heroic couplet, quatrain, Spenserian stanza, and make a brief note on the construction of the sonnet.

D.

1. Mention six devices which produce emphasis, and give an example of each. Add the corresponding unemphatic mode of four of your examples.

2. (*a*) State the family, group and branch to which English belongs, and name the other dialects of that branch. (*b*) Mention the various forms of *castra* and *strata* in proper names. (*c*) Refer the following words of Latin origin to their periods of introduction: opinion, fosse, esquire, bishop, candle, forest, duke, homage.

3. Write brief notes to show what each of the following illustrates: Welsh, Grimsby, ridge, might, thatch, lily-livered, seldom, we hopen, they askance their eyes. Mention the general character of the Italian and the Dutch contributions to modern English.

E.

1. (*a*) State, without giving any illustration, what Trench proves from an investigation of the language of savage tribes. (*b*) State briefly in what connection and in what way reference is made to each of the following. (*a*) the carefulness of the Romans in enlisting soldiers, (*b*) the Greek name of Sicily, (*c*) Mont de Pilate, (*d*) tracery in a Gothic window.

2. (*a*) Make a brief note on each of the following words: specious, officious, retract, passion, idiot. (*b*) Show briefly how Trench illustrates the difference between the Greek mind and the Hebrew, and give proof of the degeneracy of the Italians.

3. Give evidence as to the culture of the Indo-European race, while it was dwelling as one family in its common home in the East.

4. In the chapter on the rise of new words, reference is made (*a*) to the time of Louis XIV.; (*b*) to the French Revolution; (*c*) to the influence of the French Academy. Indicate in what way.

5. Write on the following pairs of words: interference, interposition; education, instruction; shire, county; hundred, rape. What does the name Wansbeckwater illustrate, and how?

ENGLISH LITERATURE.

THURSDAY, JUNE 4TH:—MORNING, 9 TO 10.30.

Examiners, ... { REV. PRINCIPAL ADAMS, M.A. / CHAS. E. MOYSE, B.A / W. CHALK, B.A.

[Answer *two* questions, and not more, from each group.]

A.

1. Name the chief poetical and prose works of John Milton, pointing out the three periods of his career. Mention any three remarkable facts about Milton, apart from his writings; state the scope of Comus.

2. Mention one characteristic work of the following authors, and give the names of two other authors contemporary with each; also a date within the lifetime of each of the seven named: Sir Philip Sidney, John Bunyan, Alexander Pope, Samuel Richardson, James Thomson, Thomas Moore, Lord Bacon.

3. State authors of following works; state whether prose or poetry, whether dramatic or lyric, general scope and bearing of work: "Legend of Good Women," "The Faery Queen," "Gulliver's Travels," "Rasselas," "Waverley," "School for Scandal."

B. *Julius Cæsar.*

4. Compare carefully the characters of Cæsar, Brutus and Cassius as portrayed in this play.

5. Explain with concise notes "Lupercal," "Ides of March," "Æneas,

our great ancestor," "the Capitol," "Cato's daughter," "My ancestors did from the streets of Rome the Tarquin drive," "Senators," "practors," "Be not fond," "Cry Havock and let slip the dogs of war," "Et tu Brute."

6. Contrast the speeches of Brutus and Antony in the 3rd Act.

C. *Lady of the Lake.*

7. According to Scott's own judgment, the interest of the "Lay" depends on its style, of "Marmion" on its descriptions, and of the "Lady of the Lake" on its *incidents;* justify this criticism so far as the last named poem is concerned, and give order and dates of the publication of the three poems.

8. Explain the allusions and give any explanatory notes on : —

(1) "A votaress in Maronnan's cell."

(2) "But wild as Bracklinn's thundering wave."

(3) "For Tine-man forged by fairy love."

(4) "Roderigh Vich Alpine dhu, ho! ieroe!"

(5) "Lis all! The King's vindictive pride
Boasts to have tamed the Border-side."

9. Annotate concisely the following :—

(1) "And while the Fiery Cross glanced, like a Meteor, round."

(2) "The virgin snood did Alice wear."

(3) "Has Coir-nan-Uriskin been sung."

(4) "The Douglas bent a bow of might."

(5) "My purse with bonnet pieces store."

HISTORY.

Primers of Greece and Rome and Collier's *Great Events.*

THURSDAY, JUNE 4TH:—AFTERNOON, 2 TO 3.30.

Examiners, ... { CHAS. E. MOYSE, B.A. / REV. PRINCIPAL ADAMS, M.A. / W. CHALK, B.A.

(N.B.—Answer *one* question of group A, *one* question of group B, and *two* questions of group C. In addition to these four questions, answer a fifth, which you may select from any portion of the paper.

A.

1. State (*a*) between what peoples each of the following battles was fought, (*b*) in what war it occurred, (*c*) which side was victorious, (*d*) the

consequences of the victory: Pydna, Arbela, Chæronea, Leuktra, Ægospotami, Mantinea, Mykale, Marathon, Lade, Salamis.

2. Mention briefly but definitely (*a*) the object and the oath of the Delphic Amphictyony; (*b*) the state to which ephors belonged, and a function of the ephors; (*c*) the alteration which Solon made in the constitution and the function of the Areopagus; (*d*) where the body of the Four Hundred was established, the party to which it belonged, and the man who was directly instrumental in bringing about its establishment; (*e*) one of the reforms of Kleisthenes; (*f*) the cause of the First Philippic, and its author; (*g*) the influence of the Olympic games on Greek feeling: the prize gained; (*h*) the State which protected the Thirty Tyrants and the most conspicuous man among them; (*i*) the attitude of the Spartans towards learning, and how they carried on agriculture.

3. Describe the siege of Syracuse in the Peloponnesian War.

B.

1. Draw a rough but large outline map of Italy and Sicily, and mark on it ten places in all, which are famous in Roman history, but are not connected with the Second Punic War. Say why you have selected them.

2. Mention (*a*) the Emperor whom Belisarius served, and a people conquered by Belisarius; (*b*) the most distinguished leader of the Huns and a great battle in which he was defeated; (*c*) the Roman leader who destroyed the city of Carthage, and the date; (*d*) the Emperor who was reigning when Dacia was made a Roman province, and, in general terms, the position of Dacia; (*e*) the members of the First Triumvirate and the fate of each; (*f*) a foreign power against whom Caius Marius fought, and the result of the war; (*g*) the intent of the Agrarian Law of Spurius Cassius; (*h*) the intent of the corn-law passed by C. Gracchus; (*i*) the first province of Rome and when it was acquired; (*j*) a function of the censors; (*k*) the intent of the Licinian law which regarded the consuls; (*l*) the proposal of Drusus concerning the citizenship, and his fate.

3. Give an account of the Second Punic War, being careful to mention events in their historical order.

C.

1. Make a brief note on each of the following: (*a*) the Caaba, (*b*) the Hegira, (*c*) the Koran, (*d*) the leading article of the Moslem faith, (*e*) two of the four duties of the Moslems, (*f*) Roderic the Visigoth, (*g*) Haroun Al Raschid, (*h*) the Cid, (*i*) Granada, (*j*) Cordova.

2. In regard to the Crusades, mention (*a*) the result of the first with reference to Godfrey of Bouillon; (*b*) the monarchs who took part in the third,

and the fate of two of them; (*c*) the final achievement of the Venetian crusaders (1204) and its political result; (*d*) the result of the crusade of Frederic II.; (*e*) the scene of the last crusade of Louis IX. and its result; (*f*) the Order of Knights which entered on a crusading career in Europe; the locality of the crusade, in general terms; what caused the downfall of the Order.

3. Mention an event which concerns the Turks and each of the following: (*a*) Tamerlane, (*b*) Constantine Palæologus, (*c*) the Knights of St. John, (*d*) Don John of Austria, (*e*) Navarino.

Mention an event in connection with (*a*) the struggle between Henry IV of Germany and the Papacy, (*b*) the league of Lombardy, (*c*) Marino Faliero, (*d*) Savonarola, (*e*) Rienzi.

4. Give an account of the French Revolution, *or*

Mention (*a*) the wars closed by the following treaties: Westphalia, Aix-la-Chapelle (eighteenth century), Utrecht; (*b*) a provision of each treaty; (*c*) a battle fought in each war, and between what peoples it was fought; (*d*) the leaders on both sides, and (*e*) by which side the victory was won.

GEOGRAPHY.

THURSDAY, JUNE 4TH:—MORNING, 10.30 TO 12.

Examiners, ... { W. CHALK, B.A. / REV. PRINCIPAL ADAMS, M.A. / CHAS. E. MOYSE, B.A.

[Answer *two* questions, and not more, from each group.]

I.

1. Describe the diurnal and annual motions of the earth. What are the effects of each? When it is mid-day on June 4th at New York, (74° W.) what is the real time at Pittsburgh (80° W.) and at Kiong-hung, (130° E.)?

2. Define the terms promontory, estuary, bore, khamsin, silvas, steppes, bise, karoo, delta, isotherm, plateau and equinox.

3. State the causes producing Trade Winds. In what directions do they blow? How do they differ from Monsoons?

II.

4. Enumerate in order those of the United States bordering on the Gulf of Mexico. Name the chief state of the Union for the production of each of the following:—iron, copper, silver, coal, cotton, tobacco.

5. Name the seas connected with (1) the Pacific, (2) the Atlantic Ocean, and name the countries bordering on each sea.

6. Where and what are Benares, Kilima, Njaro, Balkash, Perim, Irawadi, Altai, Manipur, Corea, Matabele, Heligoland, Jeddo and Singapore?

III.

7. Describe the climate of Canada. State why the amount of rainfall differs considerably in the east and west.

8. Draw a map of the St. Lawrence, marking the chief tributaries and the lakes connected with it.

9. Describe accurately the position of each of the following towns, stating for what each is important:—Moncton, St. Catharines, Kingston, Nanaimo, Summerside and Battleford. Describe also the position of Minas Basin, Trinity Bay, Hecate Strait, Northumberland Strait, Cape Race and Passamaquoddy Bay.

BOTANY.

THURSDAY, JUNE 4TH:—3.30 TO 5 P.M.

Examiner,.....D. P. PENHALLOW, B.Sc.

GROUP I.

1. Give the characteristics of an Angiospermous dicotyledon, with example.

2. Give a concise account of the structure and function of the root.

3. Explain the difference between Angiospermous and Gymnospermous pistils.

4. What part of the plant is represented by a potato and an onion? Show how these structures may be distinguished from other and similar parts.

GROUP II.

5. Explain what is meant by phylotaxis. Show what is represented by the fractions $\frac{1}{2}$ and $\frac{2}{5}$, and how they may be obtained.

6. Compare the seeds of Monocotyledons and Dicotyledons as to structure. Give examples of each.

7. Explain what is meant by the term inflorescence, and show how the two leading types are to be distinguished.

8. Explain the structure and function of a Stamen.

GROUP III.

9. Give a concise statement of the structure of a plant cell.

10. Give a description of a fern and its mode of reproduction.

11. Point out the essential differences between a buttercup and a mushroom, and show what groups of plant life they represent.

12. Describe fully the plant given.

The Candidate will answer six questions including number twelve selecting two from each group.

Examiners will please supply any common WILD flower, and take particular pains that ALL PARTS OF THE PLANT are present.

ELEMENTARY CHEMISTRY.

SATURDAY, JUNE 6TH:—MORNING, 1½ HOUR.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

NOTE.—*Answer two questions only from each group.*

I.

1. What three kinds of Chemical action are there? Give examples of each.

2. Taking 1.43 grm. as the weight of a liter of Oxygen, how many liters of the gas can be obtained from 50 grams. of Potassium Chlorate?

3. What materials would you require in order to prepare (*a*) Chlorine, (*b*) Ammonia, (*c*) Laughing Gas, (*d*) Hydrogen Sulphide?

II.

1. How does Sulphur occur in nature? State what you know with regard to its properties.

2. How is Nitric Acid obtained from Saltpetre? Express what takes place by means of an equation. Give a sketch of the apparatus that you would employ.

3. What do you understand by the statement, "Carbon can do chemical work"?

III.

1. Explain the distinction between acid-forming and base-forming elements.

2. Give the formula of each of the following substances :—Prussic Acid Marsh Gas, Calcium Hydroxide, Sodium Sulphite, Lead Sulphate.

3. Give equations illustrating the changes that take place (*a*) when Caustic Soda is treated with Hydrochline Acid, and (*b*) when Calcium Fluoride is treated with Sulphuric Acid.

PHYSIOLOGY AND HYGIENE.

FRIDAY, JUNE 5TH :—MORNING, 9 TO 10.30.

Examiners,..... { J. WM. DAWSON, LL.D.
B. J. HARRINGTON, PH.D.

NOTE.—*Answer three questions only from each group.*

GROUP A.

1. Name and describe the bones of the upper extremity.

2. Explain the principal functions of the skin.

3. State shortly the processes of digestion and absorption.

4. Describe the organ of any one of the special senses.

GROUP B.

5. How are the muscles affected by exercise, rest and disuse ?

6. What vitiates room-air, and what are the effects of such air ?

7. Name some effects of alcoholic stimulants on the brain.

8. State the bad effects of Alcohol or of Narcotics, or of tight clothing on the heart and circulation.

9. Name any important conditions of good health not mentioned in the above questions.

LE
3
M2
1891/92

McGill University, Montreal
Calendar

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY